



individualized  
computation

$d_2$



**Cover Art**

The Learning Community Alternative School of Ron Slayen  
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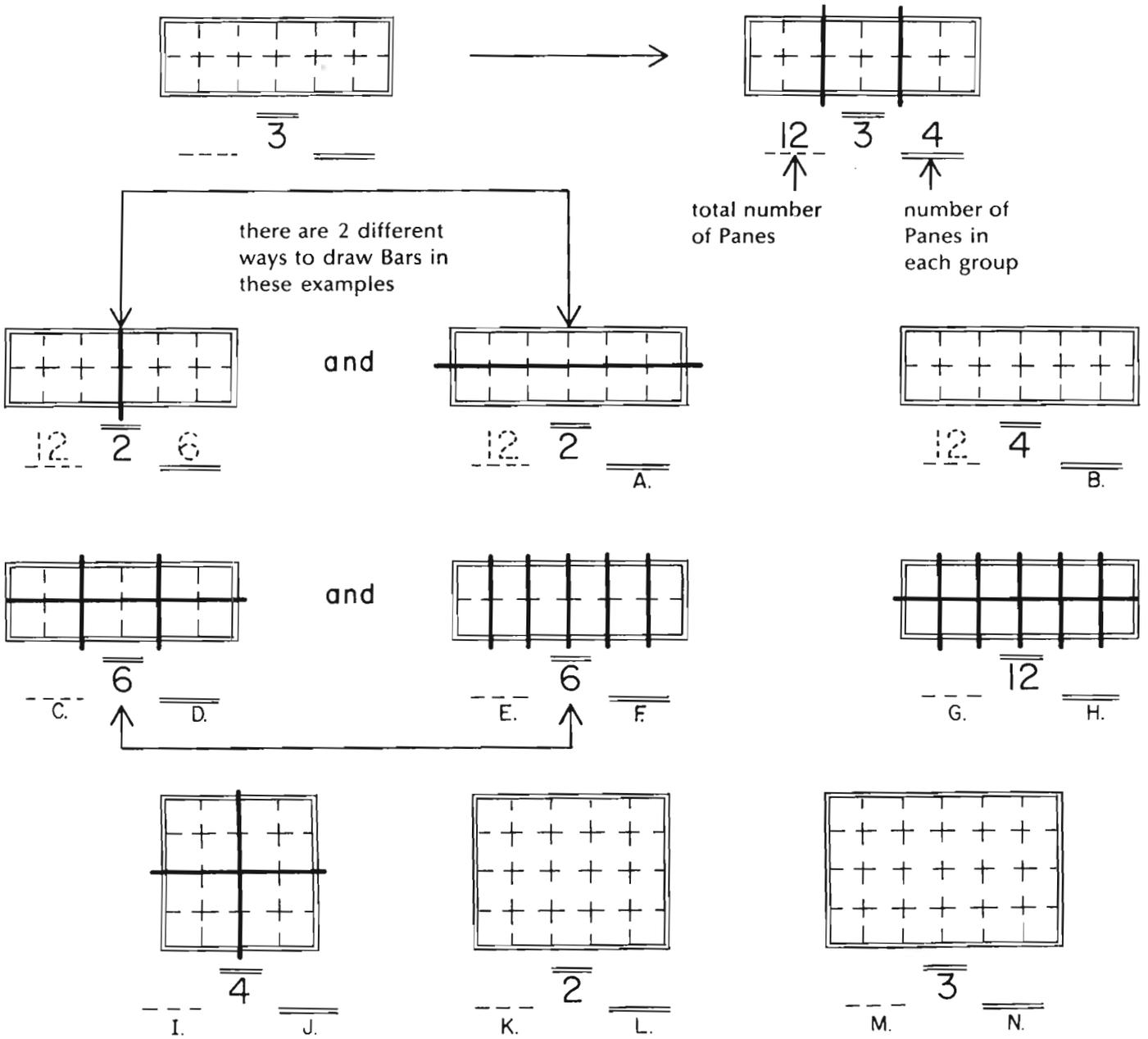
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WINDOWS and PANES . . . and Bars

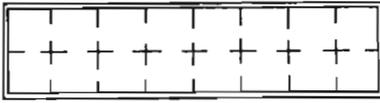
"3"  
3 . . . can be read "Bar three".

It means: draw Bars on the Windows so the Panes are divided into 3 groups with the same number of Panes in each group. Then report the number in each group.

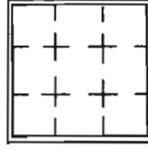


N.	A.	F.	J.	B.	G.	K.	C.	H.	L.	D.	I.	M.	E.
8	5	3	4	3	12	20	10	1	10	2	20	21	12
7	6	2	8	4	14	24	12	10	8	4	16	24	16

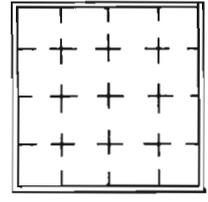
More "WINDOWS and PANES" . . . and Bars



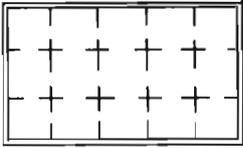
$$\frac{16}{\text{A.}} \overline{\overline{2}}$$



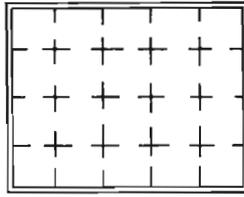
$$\frac{\text{B.}}{\text{C.}} \overline{\overline{3}}$$



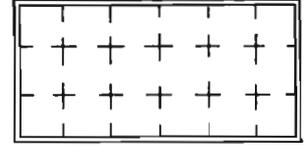
$$\frac{\text{D.}}{\text{E.}} \overline{\overline{2}}$$



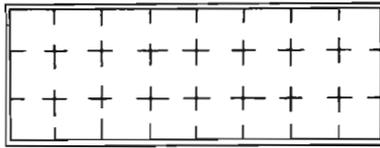
$$\frac{\text{F.}}{\text{G.}} \overline{\overline{3}}$$



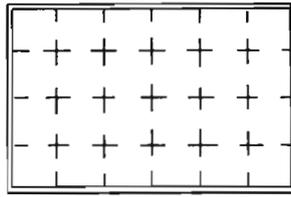
$$\frac{\text{H.}}{\text{I.}} \overline{\overline{2}}$$



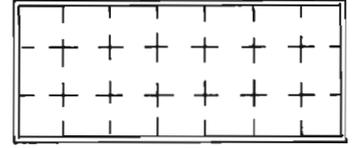
$$\frac{\text{J.}}{\text{K.}} \overline{\overline{3}}$$



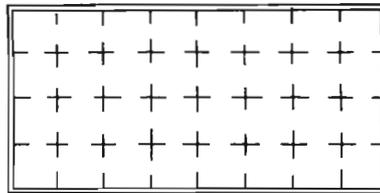
$$\frac{\text{A.}}{\text{B.}} \overline{\overline{4}}$$



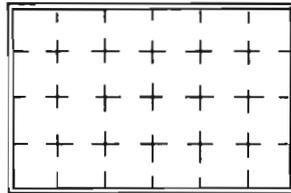
$$\frac{\text{H.}}{\text{J.}} \overline{\overline{3}}$$



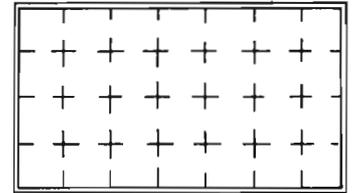
$$\frac{\text{E.}}{\text{F.}} \overline{\overline{3}}$$



$$\frac{\text{G.}}{\text{H.}} \overline{\overline{2}}$$



$$\frac{\text{I.}}{\text{K.}} \overline{\overline{4}}$$



$$\frac{\text{I.}}{\text{G.}} \overline{\overline{2}}$$

	A.	B.	C.	D.	E.	F.	G.	H.
I.	24	9	10	28	8	8	32	24
J.	8	6	24	16	18	7	5	20
K.	6	8	3	8	21	15	14	16

“WINDOWS and PANES” . . . and Bars . . . Tags from Beanstick-Rafts

A.  $\overline{4}$   $\overline{4}$

B.  $\overline{2}$  C.

E.  $\overline{4}$  F.

H.  $\overline{5}$  I.

K.  $\overline{4}$  L.

N.  $\overline{5}$  A.

C.  $\overline{5}$  D.

H.  $\overline{2}$  N.

I.  $\overline{3}$  J.

L.  $\overline{3}$  M.

F.  $\overline{2}$  N.

N.  $\overline{4}$  C.

	A.	B.	C.	D.	E.	F.	G.	H.	I.	J.	K.
L.	12	20	20	4	24	5	36	30	17	15	30
M.	5	25	10	12	20	30	24	23	3	10	20
N.	16	25	9	20	19	6	15	15	30	25	36

## FENCE ARITHMETIC

2	2	8	1
9	3	2	4
2	4	4	4
5	6	3	6

13's

A.          B.           
Total

4	3	3	5
6	1	2	3
4	4	4	3
2	3	4	5

14's

C.          A.           
Total

1	2	3	4
3	3	5	6
5	3	3	5
5	5	3	4

15's

I.          C.           
Total

## LOOP ARITHMETIC

6  
6  
6  
6  
6  
13

D.

6  
6  
6  
6  
6  
9

E.

6  
6  
6  
6  
6  
20

D.

6  
6  
6  
6  
6  
26

E.

6  
6  
6  
6  
6  
18

D.

6  
6  
6  
6  
6  
30

E.

6  
6  
6  
6  
6  
27

D.

6  
6  
6  
6  
6  
33

E.

## CHAIN REACTIONS

4 (+7) (-3) (+7) (-9) (+9) (+8) (+6) (+1) 30  
A. B.

6 (+6) (+6) (+6) (+6) (+6) (+6) (+6) (+6) 54  
C. A.

30 (-8) (-5) (+6) (+9) (-5) (-8) (+6) (-10) 15  
B.

40 (-4) (-4) (-4) (-4) (-4) 20  
B. C.

	A.	B.	C.	D.	E.
F.	56	15	24	6,6,6	1,1,1,6
G.	5	23	60	1,1,6,6,6	6,6,6,6,6
H.	8	65	18	1,6,6	1,1,1,6,6,6,6
I.	36	32	4	1,1,1,6,6,6,6	1,1,6,6,6,6

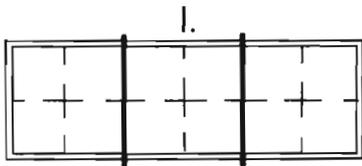
WINDOWS and PANES . . . Bars and Shading

1. Use bars to make 3 groups

$$\frac{2}{3}$$

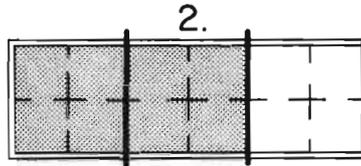
2. Shade this number of those groups

3. Report the number of panes Shaded



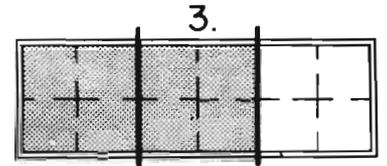
$$\underline{12} \quad \frac{2}{3} \quad \underline{\quad}$$

1. "Bar Three"



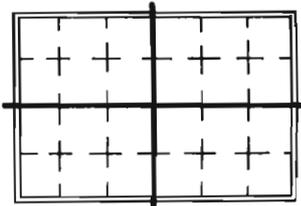
$$\underline{12} \quad \frac{2}{3} \quad \underline{\quad}$$

2. Shade 2 groups



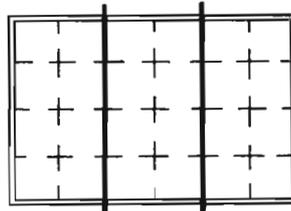
$$\underline{12} \quad \frac{2}{3} \quad \underline{8}$$

3. Report panes shaded



$$\underline{24} \quad \frac{1}{4} \quad \underline{\quad}$$

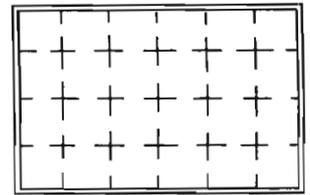
A.



$$\underline{\quad} \quad \frac{2}{3} \quad \underline{\quad}$$

B.

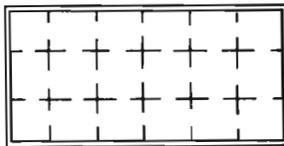
C.



$$\underline{\quad} \quad \frac{3}{6} \quad \underline{\quad}$$

D.

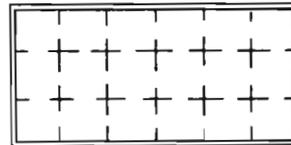
E.



$$\underline{\quad} \quad \frac{1}{2} \quad \underline{\quad}$$

F.

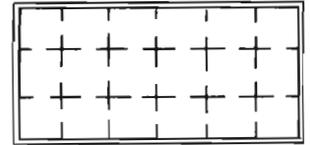
G.



$$\underline{\quad} \quad \frac{1}{3} \quad \underline{\quad}$$

H.

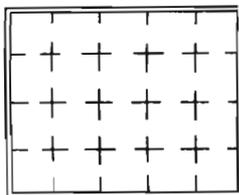
I.



$$\underline{\quad} \quad \frac{2}{6} \quad \underline{\quad}$$

J.

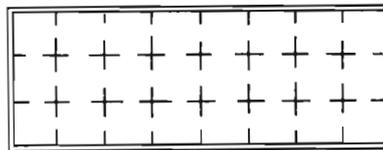
A.



$$\underline{\quad} \quad \frac{3}{4} \quad \underline{\quad}$$

B.

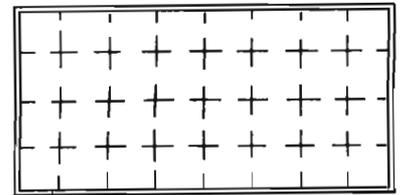
C.



$$\underline{\quad} \quad \frac{2}{3} \quad \underline{\quad}$$

D.

E.



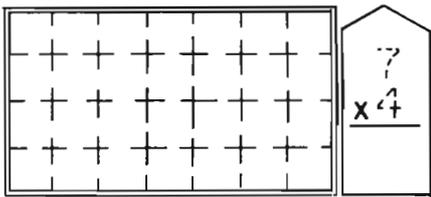
$$\underline{\quad} \quad \frac{2}{4} \quad \underline{\quad}$$

F.

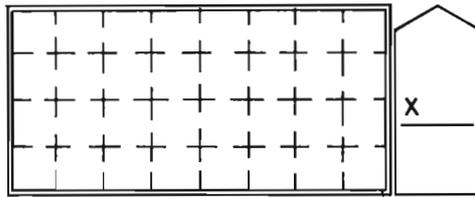
G.

A.	B.	C.	D.	E.	F.	G.	H.	I.	J.
6	24	15	19	12	32	16	18	8	18
4	20	16	24	16	18	9	20	6	24

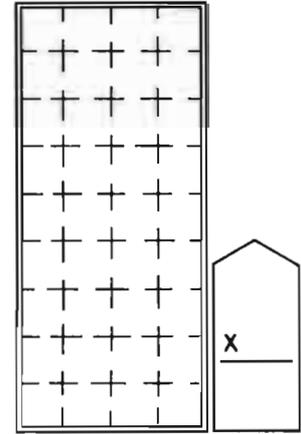
WINDOWS and PANES . . . Bars and Shading and Tags



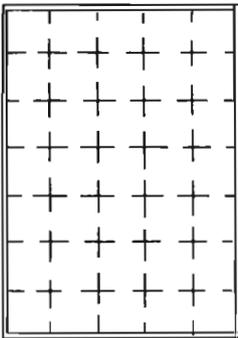
$$\frac{28}{4} = \frac{1}{A}$$



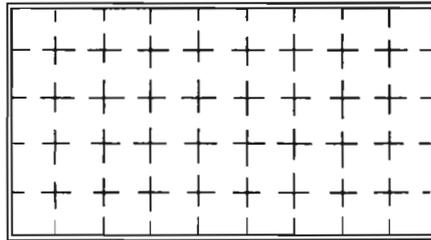
$$\frac{2}{4} = \frac{B}{C}$$



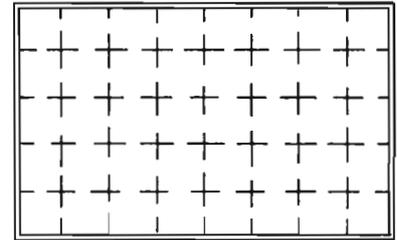
$$\frac{3}{6} = \frac{D}{E}$$



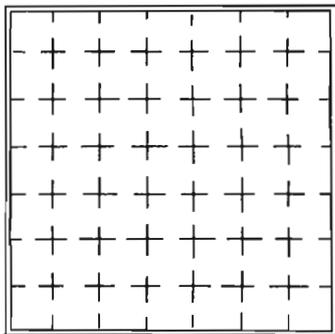
$$\frac{3}{5} = \frac{F}{G}$$



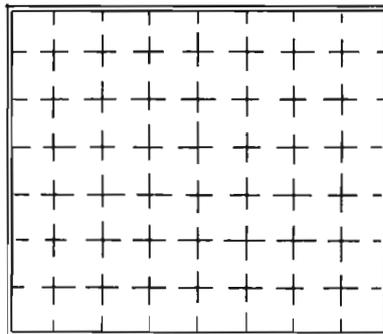
$$\frac{2}{3} = \frac{H}{I}$$



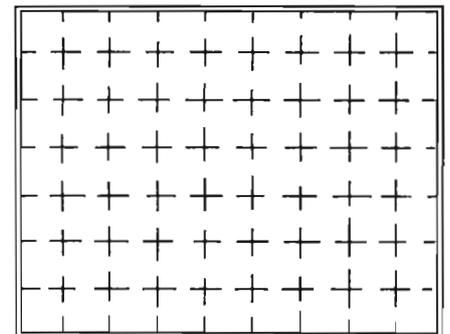
$$\frac{3}{4} = \frac{A}{B}$$



$$\frac{4}{7} = \frac{C}{D}$$



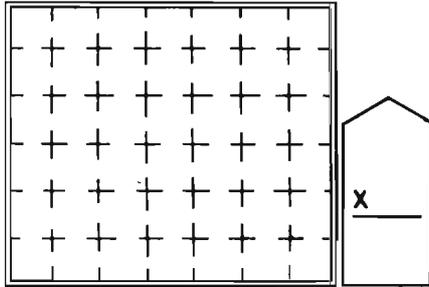
$$\frac{2}{4} = \frac{E}{F}$$



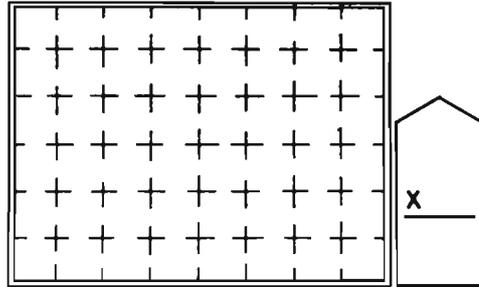
$$\frac{1}{3} = \frac{G}{H}$$

A.	B.	C.	D.	E.	F.	G.	H.	I.
7	30	49	36	6	28	21	45	32
40	32	16	28	56	35	63	21	30

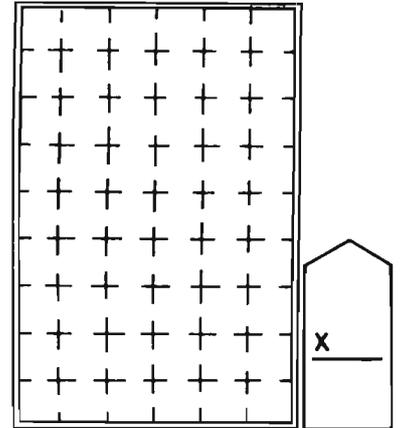
WINDOWS and PANES . . . Bars and Shading and Tags



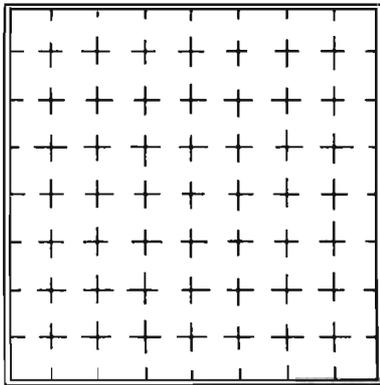
--- A.  $\frac{1}{3}$  --- B. ---



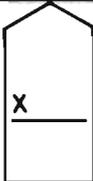
--- C.  $\frac{3}{4}$  --- D. ---

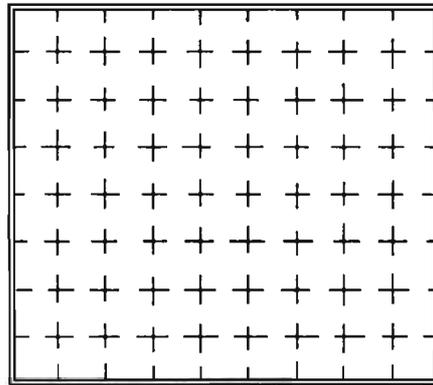


--- E.  $\frac{1}{3}$  --- F. ---

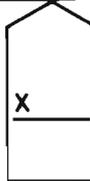


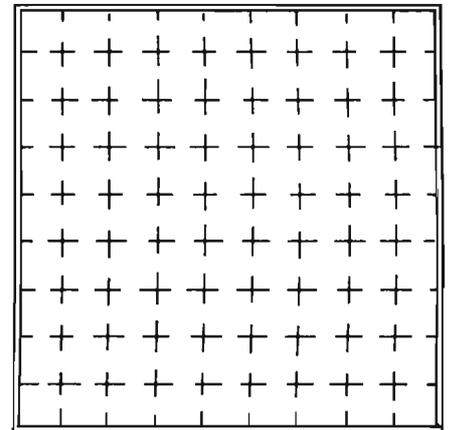
--- G.  $\frac{1}{4}$  --- A. ---



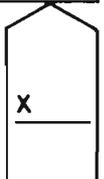


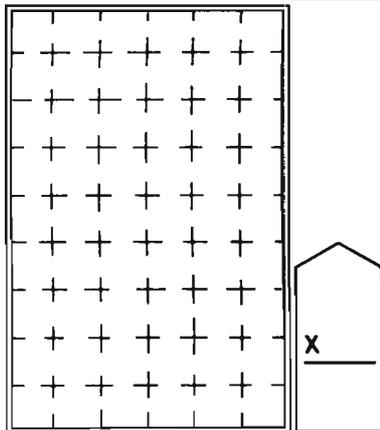
--- B.  $\frac{1}{2}$  --- D. ---



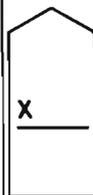


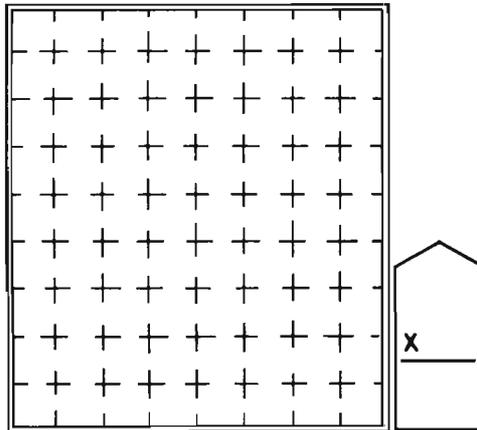
--- C.  $\frac{1}{3}$  --- D. ---



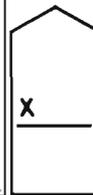


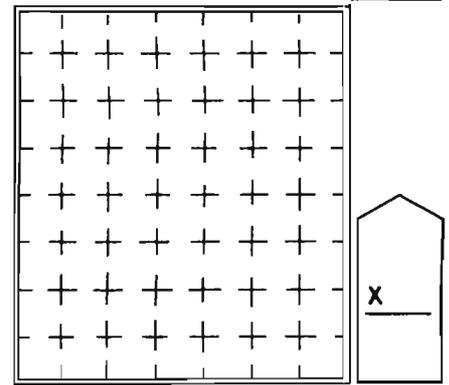
--- E.  $\frac{4}{6}$  --- D. ---



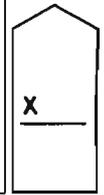


--- F.  $\frac{2}{3}$  --- C. ---





--- G.  $\frac{3}{4}$  --- E. ---



A.	B.	C.	D.	E.	F.	G.
42	72	81	36	42	18	64
16	14	48	27	54	72	56

FENCE ARITHMETIC

4	1	7	5
3	6	2	3
4	5	1	2
5	5	5	6

3	1	3	6
3	2	7	4
5	4	5	5
4	8	2	6

4	3	4	2
5	6	2	3
3	4	7	6
5	7	5	6

16's

A.          B.           
Total

17's

----- C.           
Total

18's

-----           
Total

LOOP ARITHMETIC

3	3	3	3	3	3	3	3
3	3	3	3	3	3	3	3
3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4
4	4	4	4	4	4	4	4
4	4	4	4	4	4	4	4
4	4	4	4	4	4	4	4
4	4	4	4	4	4	4	4
9	12	11	18	17	29	26	21
D.	E.	F.		G.		H.	

CHAIN REACTIONS

15	+3	+4	+5	+6	+7	+8	+9	+10	67
F.				C.					
60	-6	-6	-6	-6	-6	-6	-6	-6	
H.				B.					
50	-9	-8	-7	-6	-5	-4	-3	-2	6
G.									
9	+9	+9	+9	+9	+9	54			
H.									

	A.	B.	C.	D.	E.
F.	22	30	40	3,4,4	4,4,4
G.	4	26	68	9	3,3,3,4,4
H.	48	64	45	3,3,3	3,3,4,4,4,4,4

ANOTHER WAY TO REPORT

Windows and Panes . . . Bars and Shading

"1/2" can be read "one half"

"1/4" or "one fourth"

"1/5" or "one fifth"

"1/3" can be read "one third"

"2/4" or "two fourths"

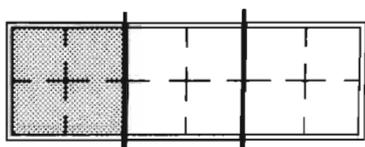
"3/8" or "three eighths"

"2/3" can be read "two thirds"

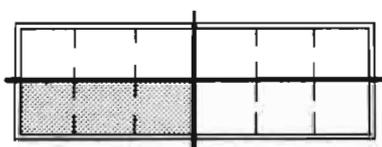
"3/4" or "three fourths"

"7/9" or "seven ninths"

Etc.



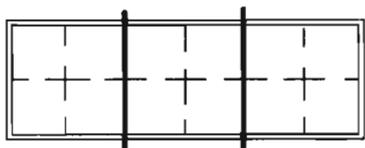
$\frac{1}{3}$  of 12 is A.



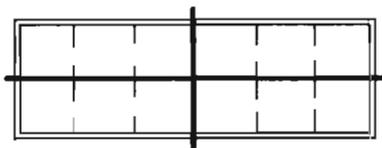
$\frac{1}{4}$  of 12 is B.



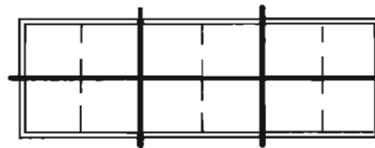
$\frac{1}{6}$  of 12 is C.



$\frac{2}{3}$  of 12 is D.



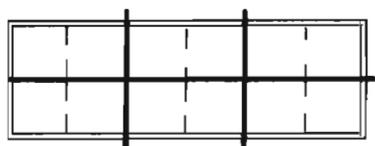
$\frac{3}{4}$  of --- is E.



$\frac{2}{6}$  of --- is F.

IN SHORT-HAND

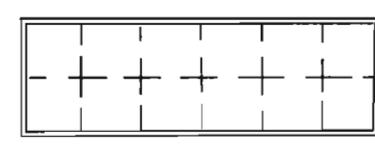
The idea of "1/2 of 12 is 6" can be written " $\frac{1}{2} \times 12 = 6$ "



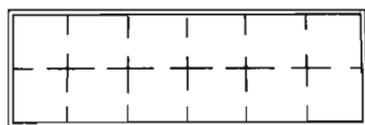
$\frac{4}{6}$  x 12 = A.



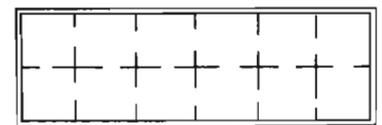
$\frac{1}{12}$  x 12 = B.



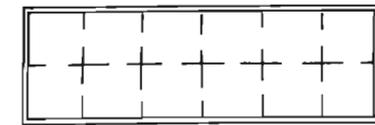
$\frac{6}{12}$  x 12 = C.



$\frac{1}{2}$  x --- = D.



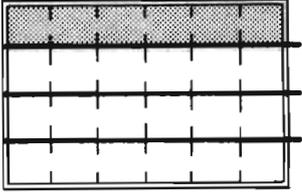
$\frac{2}{4}$  x --- = E.



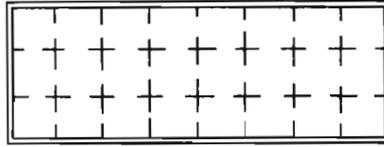
$\frac{3}{6}$  x --- = F.

	A.	B.	C.	D.	E.
F.	4	1	2	6	9
G.	8	3	6	8	6

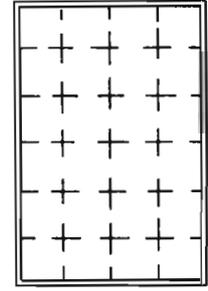
WINDOWS and PANES . . . Bars and Shading



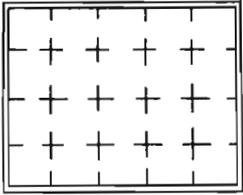
$$\frac{1}{4} \times \text{A.} = \text{B.}$$



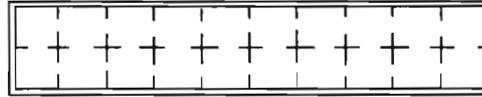
$$\frac{2}{4} \times \text{F.} = \text{D.}$$



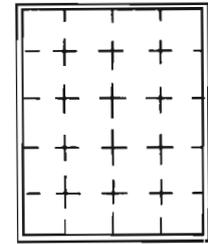
$$\frac{3}{4} \times \text{A.} = \text{B.}$$



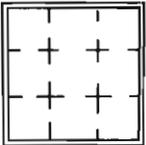
$$\frac{1}{5} \times \text{---} = \text{C.}$$



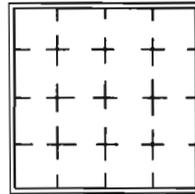
$$\frac{2}{5} \times \text{---} = \text{E.}$$



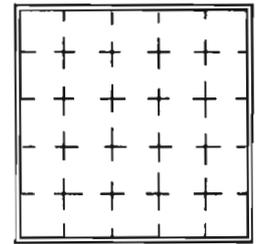
$$\frac{3}{5} \times \text{---} = \text{D.}$$



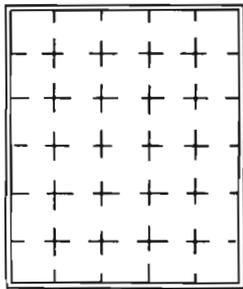
$$\frac{2}{3} \times \text{---} = \text{B.}$$



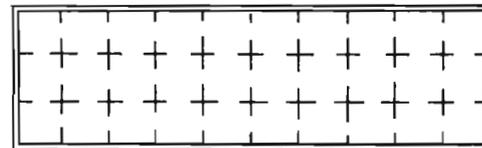
$$\frac{3}{4} \times \text{---} = \text{F.}$$



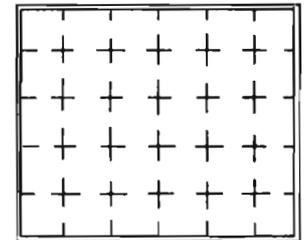
$$\frac{4}{5} \times \text{---} = \text{E.}$$



$$\frac{1}{2} \times \text{---} = \text{C.}$$



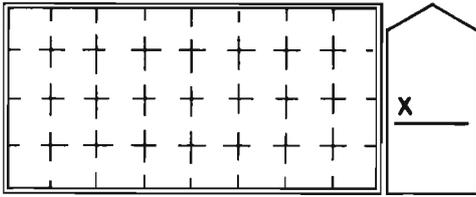
$$\frac{3}{6} \times \text{---} = \text{E.}$$



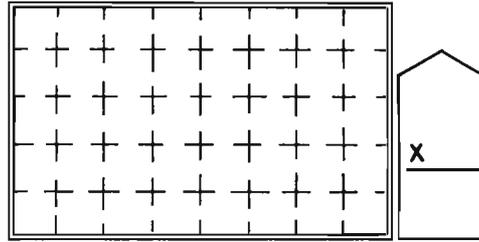
$$\frac{5}{10} \times \text{---} = \text{C.}$$

	A.	B.	C.	D.
E.	20	6	15	8
F.	24	18	4	12

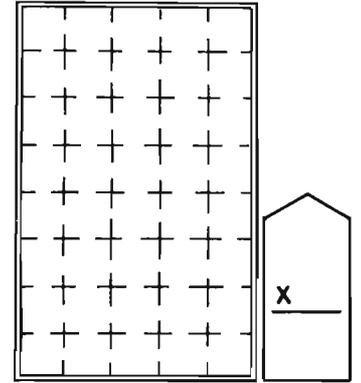
WINDOWS and PANES . . . Tags . . . Bars and Shading



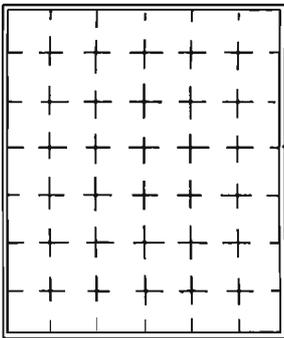
-- A.  $\frac{3}{4}$  -- B.



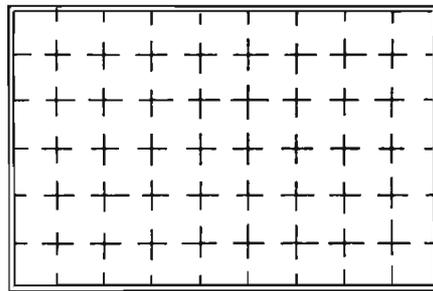
-- C.  $\frac{2}{5}$  -- D.



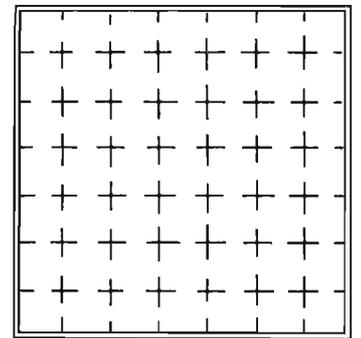
-- C.  $\frac{1}{2}$  -- F.



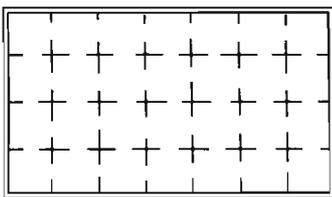
-- E.  $\frac{2}{3}$  -- D.



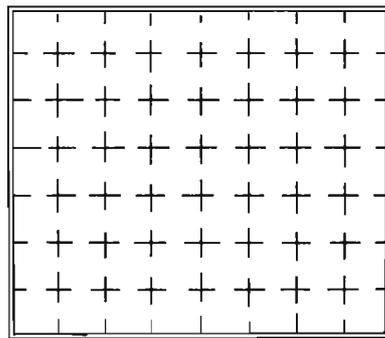
-- K.  $\frac{3}{6}$  -- H.



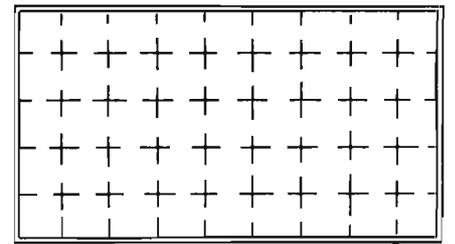
-- A.  $\frac{5}{7}$  -- B.



-- I.  $\frac{1}{2}$  -- C.



-- J.  $\frac{3}{4}$  -- F.

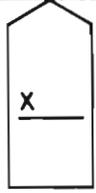


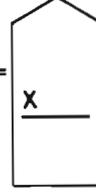
-- H.  $\frac{1}{3}$  -- K.

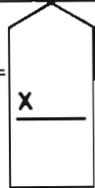
A.	E.	I.	B.	F.	J.	C.	G.	K.	D.	H.
32	40	35	24	20	14	40	18	15	16	27
49	42	28	35	42	56	14	27	54	28	45

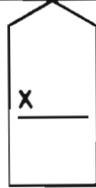
WINDOWS and PANES . . . Tags . . . Bars and Shading

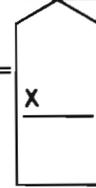
-----  $\frac{2}{4}$  = 

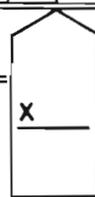
-----  $\frac{1}{2}$  = 

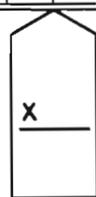
-----  $\frac{3}{4}$  = 

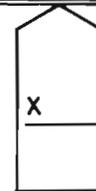
-----  $\frac{3}{6}$  = 

-----  $\frac{2}{3}$  = 

-----  $\frac{4}{7}$  = 

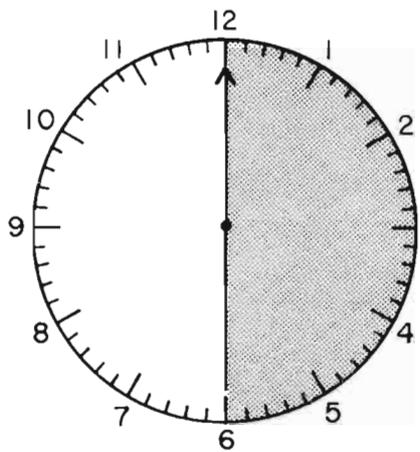
-----  $\frac{3}{4}$  = 

-----  $\frac{1}{2}$  = 

-----  $\frac{2}{3}$  = 

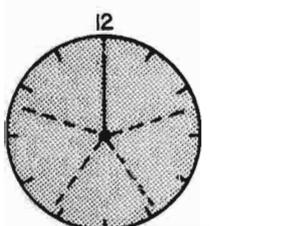
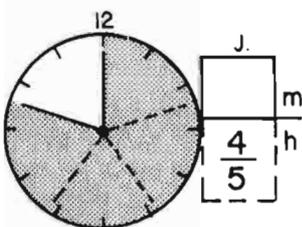
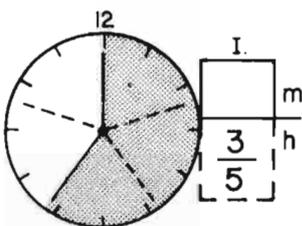
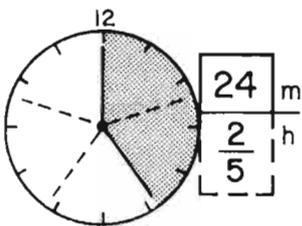
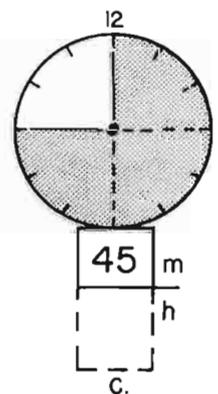
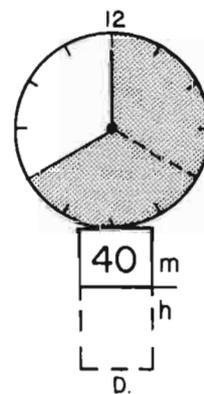
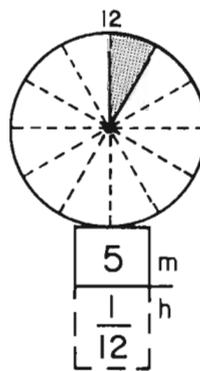
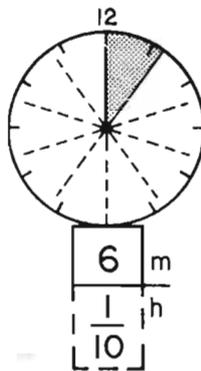
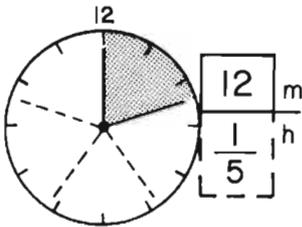
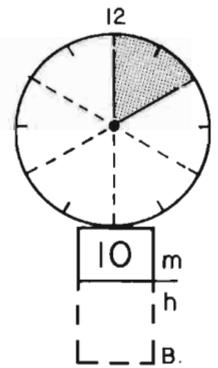
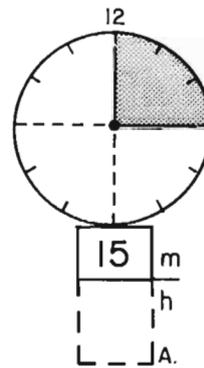
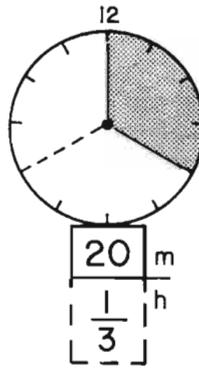


How do you feel?



$\boxed{30}$  minutes  
 $\boxed{\frac{1}{2}}$  hours

1 Hour = 60 Minutes



"One-half hour" is the same as "30 minutes"

$\frac{1}{2}$  hour =  $\boxed{30}$  minutes

$\frac{1}{3}$  hour =  $\boxed{20}$  minutes

$\frac{2}{3}$  hour =  $\boxed{40}$  minutes

$\frac{1}{4}$  hour =  $\boxed{15}$  minutes

$\frac{3}{4}$  hour =  $\boxed{45}$  minutes

$\frac{1}{5}$  hour =  $\boxed{12}$  minutes

$\frac{20}{3} + \frac{10}{6} = \frac{30}{2}$

$\frac{45}{4} - \frac{15}{4} = \frac{30}{4}$

20 min. + 10 min. = 30 min.

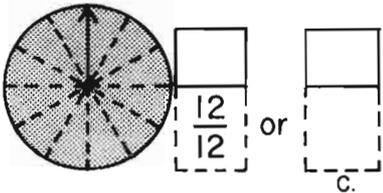
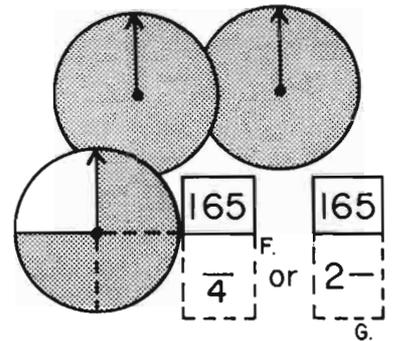
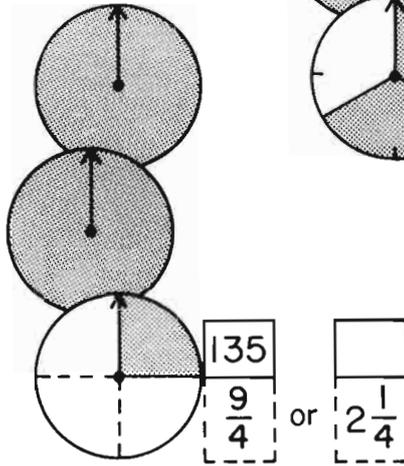
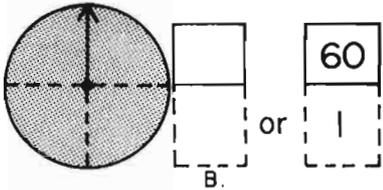
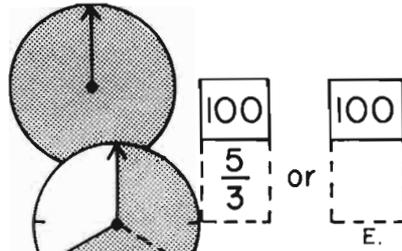
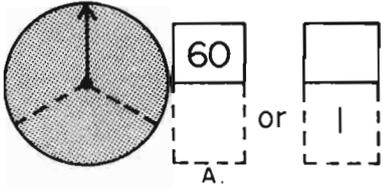
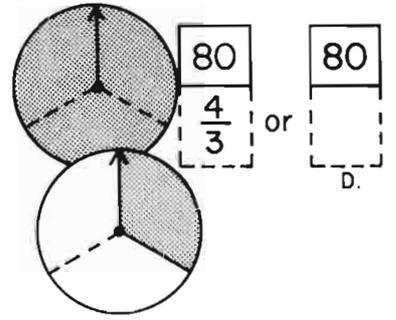
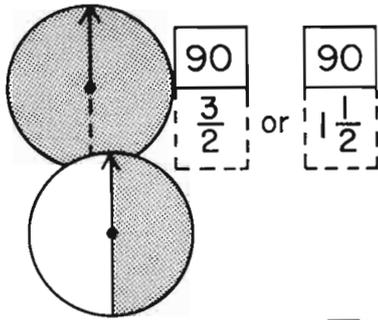
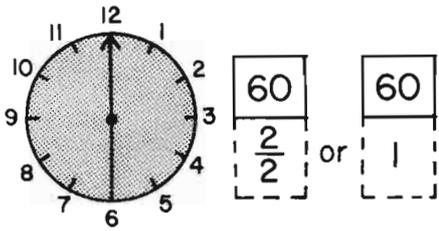
$\frac{1}{3}$  hr. +  $\frac{1}{6}$  hr. =  $\frac{1}{2}$  hr.

45 min. - 15 min. = 30 min.

$\frac{3}{4}$  hr. -  $\frac{1}{4}$  hr. =  $\frac{1}{2}$  hr.

$\boxed{60}$  m  
 $\boxed{\frac{5}{5}}$  or  $\boxed{1}$  h

A.	G.	M.	B.	H.	N.	C.	I.	O.	D.	J.	P.	E.	K.	Q.	F.	L.	R.
$\frac{1}{4}$	10	45	$\frac{1}{6}$	15	30	$\frac{3}{4}$	36	$\frac{1}{2}$	$\frac{2}{3}$	48	$\frac{1}{4}$	12	30	$\frac{1}{2}$	18	15	$\frac{1}{2}$



minutes	60	30	15	45	20	40	10	12	N.	36	48	O.	
hours	1	1/2							2/5			1/2	1/3
			H.	I.	J.	K.	L.	M.					

m	30	+	15	=	
h		+		=	
	P.		Q.		R.

m	10	+	10	=	
h		+		=	
					S.

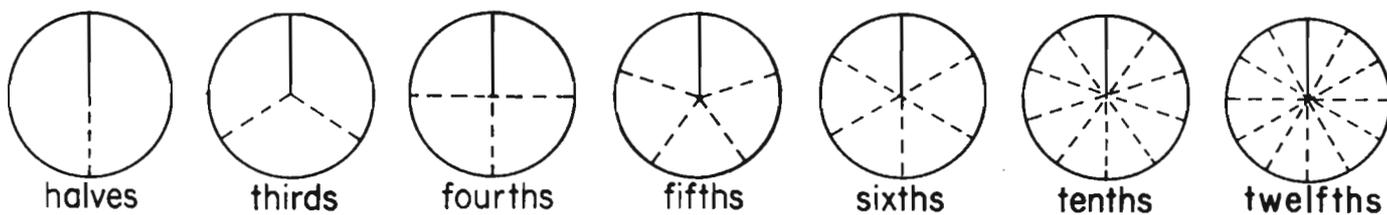
m	45	+	45	=	T.
h		+		=	U.

m	30	-	20	=	10
h		-		=	
					V.

m	60	-	12	=	
h		-		=	
					W.

m	80	-	40	=	
h		-		=	
					X.

A.	G.	M.	S.	B.	H.	N.	T.	C.	I.	O.	U.	D.	J.	P.	V.	E.	K.	Q.	W.	F.	L.	R.	X.
3/3	2 3/4	1/5	1/3	4/4	1/4	24	90	1	3/4	90	1 1/2	1/3	1/3	1/2	1/6	1 2/3	2/3	1/4	1	11/4	1/6	3/4	1/5



m	30	60	90	
h	$\frac{1}{2}$	$\frac{2}{2}$	$\frac{3}{2}$	$\frac{4}{2}$

m	20	40		
h	$\frac{1}{3}$	$\frac{2}{3}$	$\frac{3}{3}$	$\frac{4}{3}$

m	15			
h	$\frac{1}{4}$	$\frac{2}{4}$	$\frac{3}{4}$	$\frac{4}{4}$

Please extend the patterns.

m	12	24				72
h	$\frac{1}{5}$	$\frac{2}{5}$	$\frac{3}{5}$			

A.

m	10	20					70
h	$\frac{1}{6}$	$\frac{2}{6}$				$\frac{6}{6}$	

B.

m	6	12	18	24		36							84
h	$\frac{1}{10}$	$\frac{2}{10}$	$\frac{3}{10}$										

C.

D.

E.

F.

G.

H.

m	5	10		20					45					70
h	$\frac{1}{12}$	$\frac{2}{12}$	$\frac{3}{12}$											

I.

There are different ways to talk about the same number of minutes.

m	60	60	60	60	60	60	60
h							

m	20	20	20
h			

m	48	48
h		

m	30	30	30	30	30
h					

m	40	40	40
h			

m	15	15
h		

m	50	50
h		

A.	B.	C.	D.	E.	F.	G.	H.	I.
$\frac{5}{5}$	$\frac{3}{6}$	$\frac{4}{10}$	$\frac{5}{10}$	$\frac{10}{10}$	$\frac{11}{10}$	$\frac{12}{10}$	$\frac{14}{10}$	$\frac{14}{12}$

minutes	60	30	20	40	15	45	12	24	36	48	10	50
hours	$\frac{1}{1}$	$\frac{1}{2}$						$\frac{2}{5}$				
			A.		B.		C.				D.	

m	6	18			5	25	35				75		72	84
h		$\frac{3}{10}$	$\frac{7}{10}$	$\frac{9}{10}$				$\frac{11}{12}$	$\frac{1}{2}$	$\frac{1}{3}$		$\frac{3}{4}$		
	E.				F.						G.			H.

$$\begin{array}{|c|} \hline 20 \\ \hline \frac{1}{3} \\ \hline \end{array} + \begin{array}{|c|} \hline 25 \\ \hline \frac{5}{2} \\ \hline \end{array} = \begin{array}{|c|} \hline 45 \\ \hline \\ \hline \end{array}$$

A.

$$\begin{array}{|c|} \hline 18 \\ \hline \\ \hline \end{array} + \begin{array}{|c|} \hline \\ \hline \frac{2}{5} \\ \hline \end{array} = \begin{array}{|c|} \hline \\ \hline \\ \hline \end{array}$$

B.

$$\begin{array}{|c|} \hline \\ \hline \frac{3}{4} \\ \hline \end{array} + \begin{array}{|c|} \hline \\ \hline \frac{1}{2} \\ \hline \end{array} = \begin{array}{|c|} \hline \\ \hline \\ \hline \end{array}$$

D.

$$\begin{array}{|c|} \hline 20 \\ \hline \\ \hline \end{array} - \begin{array}{|c|} \hline 15 \\ \hline \\ \hline \end{array} = \begin{array}{|c|} \hline \\ \hline \\ \hline \end{array}$$

E.

$$\begin{array}{|c|} \hline \\ \hline \frac{1}{4} \\ \hline \end{array} - \begin{array}{|c|} \hline \\ \hline \frac{3}{4} \\ \hline \end{array} = \begin{array}{|c|} \hline \\ \hline \\ \hline \end{array}$$

F.

$$\begin{array}{|c|} \hline \\ \hline 1 \\ \hline \end{array} - \begin{array}{|c|} \hline \\ \hline \frac{1}{12} \\ \hline \end{array} = \begin{array}{|c|} \hline \\ \hline \\ \hline \end{array}$$

G.

$$\begin{array}{|c|} \hline \\ \hline \frac{2}{3} \\ \hline \end{array} + \begin{array}{|c|} \hline \\ \hline \frac{2}{3} \\ \hline \end{array} = \begin{array}{|c|} \hline \\ \hline \\ \hline \end{array}$$

H.

$$\begin{array}{|c|} \hline \\ \hline \frac{1}{2} \\ \hline \end{array} - \begin{array}{|c|} \hline \\ \hline \frac{1}{6} \\ \hline \end{array} = \begin{array}{|c|} \hline \\ \hline \\ \hline \end{array}$$

I.

$$\begin{array}{|c|} \hline \\ \hline \frac{2}{5} \\ \hline \end{array} + \begin{array}{|c|} \hline \\ \hline \frac{1}{10} \\ \hline \end{array} = \begin{array}{|c|} \hline \\ \hline \\ \hline \end{array}$$

J.

$$\begin{array}{|c|} \hline \\ \hline \frac{1}{5} \\ \hline \end{array} + \begin{array}{|c|} \hline \\ \hline \frac{1}{5} \\ \hline \end{array} = \begin{array}{|c|} \hline \\ \hline \\ \hline \end{array}$$

K.

$$\begin{array}{|c|} \hline \\ \hline \frac{1}{2} \\ \hline \end{array} + \begin{array}{|c|} \hline \\ \hline \frac{1}{4} \\ \hline \end{array} = \begin{array}{|c|} \hline \\ \hline \\ \hline \end{array}$$

L.

$$\begin{array}{|c|} \hline \\ \hline \frac{1}{2} \\ \hline \end{array} - \begin{array}{|c|} \hline \\ \hline \frac{1}{4} \\ \hline \end{array} = \begin{array}{|c|} \hline \\ \hline \\ \hline \end{array}$$

$$(2x) \begin{array}{|c|} \hline 15 \\ \hline \frac{1}{4} \\ \hline \end{array} = \begin{array}{|c|} \hline 30 \\ \hline \\ \hline \end{array}$$

M.

$$(3x) \begin{array}{|c|} \hline 10 \\ \hline \frac{1}{6} \\ \hline \end{array} = \begin{array}{|c|} \hline \\ \hline \\ \hline \end{array}$$

N.

$$(5x) \begin{array}{|c|} \hline 6 \\ \hline \\ \hline \end{array} = \begin{array}{|c|} \hline \\ \hline \\ \hline \end{array}$$

O.

$$\begin{array}{|c|} \hline 40 \\ \hline \frac{2}{3} \\ \hline \end{array} (\div 2) = \begin{array}{|c|} \hline 20 \\ \hline \\ \hline \end{array}$$

Q.

$$\begin{array}{|c|} \hline 45 \\ \hline \frac{3}{4} \\ \hline \end{array} (\div 3) = \begin{array}{|c|} \hline \\ \hline \\ \hline \end{array}$$

R.

$$\begin{array}{|c|} \hline 24 \\ \hline \\ \hline \end{array} (\div 4) = \begin{array}{|c|} \hline \\ \hline \\ \hline \end{array}$$

S.

A.	F.	K.	P.	B.	G.	L.	Q.	C.	H.	M.	R.	D.	I.	N.	S.	E.	J.	O.	T.
$\frac{1}{3}$	$\frac{1}{12}$	$\frac{2}{5}$	$\frac{1}{2}$	$\frac{1}{4}$	$\frac{11}{12}$	$\frac{3}{4}$	$\frac{1}{3}$	$\frac{1}{5}$	$\frac{1}{3}$	$\frac{1}{2}$	$\frac{1}{4}$	$\frac{1}{6}$	$\frac{1}{3}$	$\frac{1}{2}$	$\frac{2}{5}$	$\frac{1}{10}$	$\frac{1}{2}$	$\frac{1}{10}$	$\frac{1}{10}$
$\frac{3}{4}$	$\frac{1}{2}$	$\frac{9}{10}$	$\frac{11}{12}$	$\frac{3}{10}$	$\frac{1}{4}$	$\frac{5}{12}$	$\frac{3}{5}$	$\frac{3}{10}$	$\frac{2}{5}$	$\frac{1}{3}$	$\frac{5}{6}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{3}{10}$	$\frac{3}{4}$	$\frac{1}{12}$	$\frac{2}{3}$	$\frac{3}{10}$	$\frac{1}{2}$

FENCE ARITHMETIC

5	9	4	9
6	9	1	6
8	1	6	8
6	6	8	3

--- A.  $\textcircled{19's}$       B.      Total

8	6	2	4
4	4	4	5
4	7	4	5
6	7	5	5

---  $\textcircled{20's}$       C.      Total

3	6	3	6
4	11	4	6
14	8	5	6
6	7	9	7

---  $\textcircled{21's}$       C.      Total

LOOP ARITHMETIC

4
4
4
9
9
9
9
9
9
9
9
22

D.

4
4
4
9
9
9
9
9
9
9
9
17

F.

4
4
4
9
9
9
9
9
9
9
9
27

H.

4
4
4
9
9
9
9
9
9
9
9
49

E.

4
4
4
9
9
9
9
9
9
9
9
21

E.

4
4
4
9
9
9
9
9
9
9
9
40

H.

4
4
4
9
9
9
9
9
9
9
9
39

H.

4
4
4
9
9
9
9
9
9
9
9
44

H.

CHAIN REACTIONS

8  $\textcircled{+7}$   $\textcircled{-9}$   $\textcircled{+6}$   $\textcircled{+8}$   $\textcircled{-4}$   $\textcircled{+5}$   $\textcircled{+9}$   $\textcircled{+9}$  39

F.

G.

15  $\textcircled{+8}$   $\textcircled{+9}$   $\textcircled{-6}$   $\textcircled{-8}$   $\textcircled{+7}$   $\textcircled{+8}$   $\textcircled{-7}$   $\textcircled{-6}$  20

B.

C.

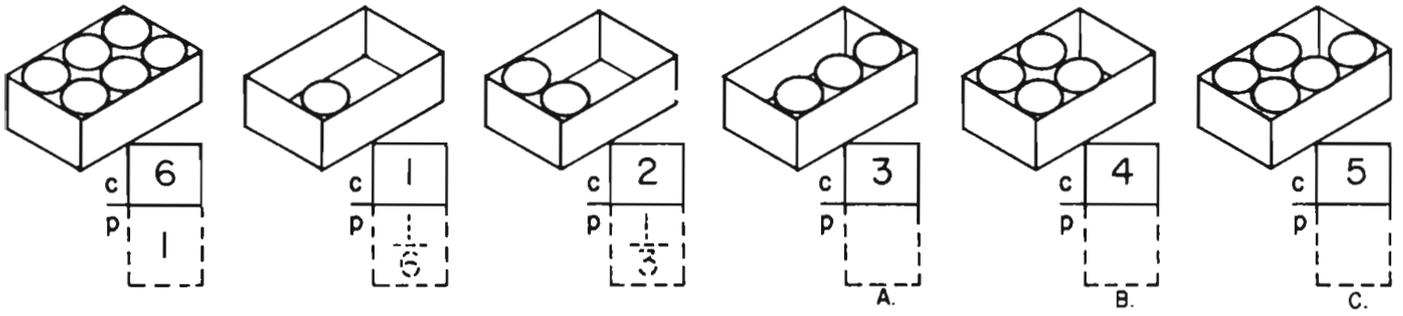
8  $\textcircled{+8}$   $\textcircled{+8}$   $\textcircled{+8}$   $\textcircled{+8}$   $\textcircled{+8}$   $\textcircled{+8}$   $\textcircled{+8}$   $\textcircled{+8}$  72

F.

$\textcircled{-5}$   $\textcircled{-9}$   $\textcircled{+5}$   $\textcircled{-8}$   $\textcircled{+9}$  42

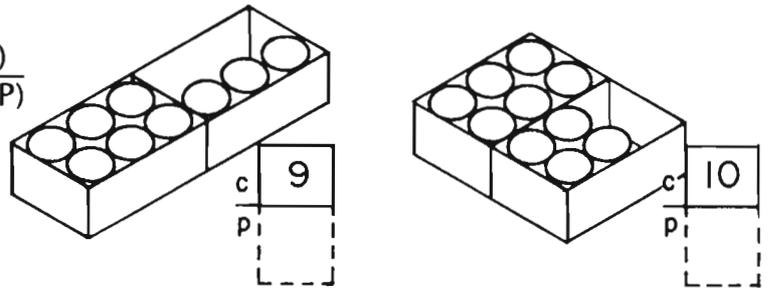
A.

	A.	B.	C.	D.	E.
F.	6	32	80	4,4,9	4,4,4,9
G.	5	16	25	4,9,9	4,4,9,9,9,9
H.	33	95	105	9,9,9	4,4,4,9,9,9



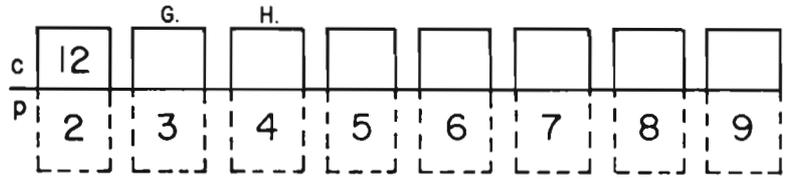
DOUBLE-TALK . . . about . . .

$\frac{\text{Cans (C)}}{\text{6-Packs (P)}}$



“One Six-Pack has Six Cans”

$\frac{1}{2}$  six-pack = \_\_\_ cans  
 $\frac{5}{6}$  six-pack = \_\_\_ cans  
 2 six-packs = \_\_\_ cans



$$\frac{\quad}{\frac{5}{6}} + \frac{\quad}{\frac{1}{6}} = \frac{\quad}{\quad}$$

J.

$$\frac{\quad}{\frac{2}{3}} - \frac{\quad}{\frac{1}{3}} = \frac{\quad}{\quad}$$

K.

$$\frac{\quad}{\frac{1}{2}} + \frac{\quad}{\frac{1}{2}} = \frac{\quad}{\quad}$$

$$\frac{10}{\quad} - \frac{4}{\quad} = \frac{\quad}{\quad}$$

L. M. N.

$$\frac{\quad}{\frac{2}{3}} + \frac{\quad}{\frac{5}{6}} = \frac{\quad}{\quad}$$

O.

$$\frac{\quad}{\frac{1}{2}} - \frac{\quad}{\frac{1}{6}} = \frac{\quad}{\quad}$$

$$(2 \times) \frac{\quad}{\frac{1}{6}} = \frac{\quad}{\quad}$$

P.

$$(5 \times) \frac{\quad}{\frac{1}{3}} = \frac{\quad}{\quad}$$

Q.

$$(3 \times) \frac{18}{3} = \frac{\quad}{\quad}$$

R.

$$\frac{6}{\quad} (\div 2) = \frac{\quad}{\quad}$$

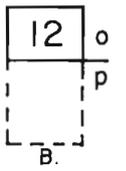
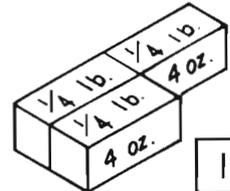
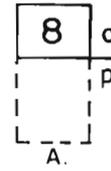
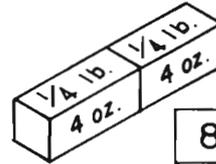
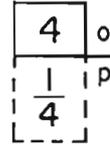
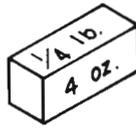
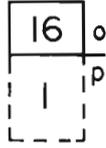
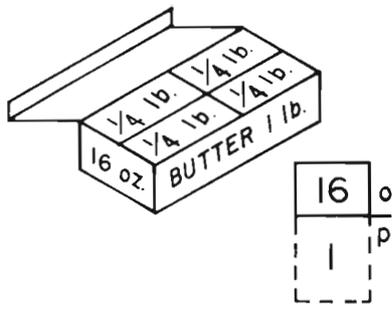
S.

$$\frac{\quad}{\frac{1}{2}} (\div 3) = \frac{\quad}{\quad}$$

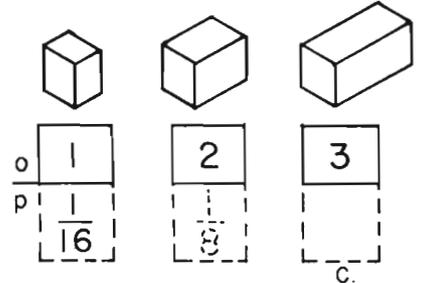
$$\frac{36}{\quad} (\div 4) = \frac{\quad}{\quad}$$

T.

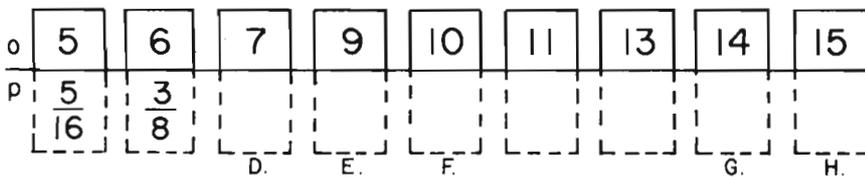
A.	B.	C.	D.	E.	F.	G.	H.	I.	J.	K.	L.	M.	N.	O.	P.	Q.	R.	S.	T.								
$\frac{1}{2}$	$\frac{2}{3}$	$\frac{5}{6}$	$1\frac{2}{3}$	$\frac{10}{6}$	5	12	18	24	54	1	$\frac{6}{6}$	$\frac{1}{3}$	$1\frac{2}{3}$	$\frac{10}{6}$	$\frac{2}{3}$	1	$\frac{6}{6}$	$1\frac{1}{2}$	$\frac{9}{6}$	$\frac{1}{3}$	$\frac{2}{6}$	$1\frac{2}{3}$	$\frac{10}{6}$	9	$\frac{1}{2}$	$1\frac{1}{2}$	$\frac{9}{6}$



There are  Ounces in  Pound.



... or More DOUBLE-TALK



$$\frac{6}{\quad} + \frac{2}{\quad} = \frac{\quad}{\quad}$$

I. J. K.

$$\frac{\quad}{4} + \frac{\quad}{2} = \frac{\quad}{\quad}$$

$$\frac{\quad}{16} + \frac{9}{16} = \frac{\quad}{\quad}$$

L.

$$\frac{\quad}{4} - \frac{\quad}{4} = \frac{\quad}{\quad}$$

M.

$$\frac{\quad}{1} - \frac{1}{8} = \frac{\quad}{\quad}$$

N.

$$\frac{\quad}{2} - \frac{1}{4} = \frac{\quad}{\quad}$$

$$\left(\frac{1}{2} \text{ of}\right) \frac{8}{\quad} = \frac{\quad}{\quad}$$

O. P.

$$\left(\frac{1}{3} \text{ of}\right) \frac{\quad}{9} = \frac{\quad}{\quad}$$

Q.

$$\left(\frac{1}{4} \text{ of}\right) \frac{8}{\quad} = \frac{\quad}{\quad}$$

R. S.

$$\frac{8}{\quad} (\div 2) = \frac{\quad}{\quad}$$

T.

$$\frac{9}{\quad} (\div 3) = \frac{\quad}{\quad}$$

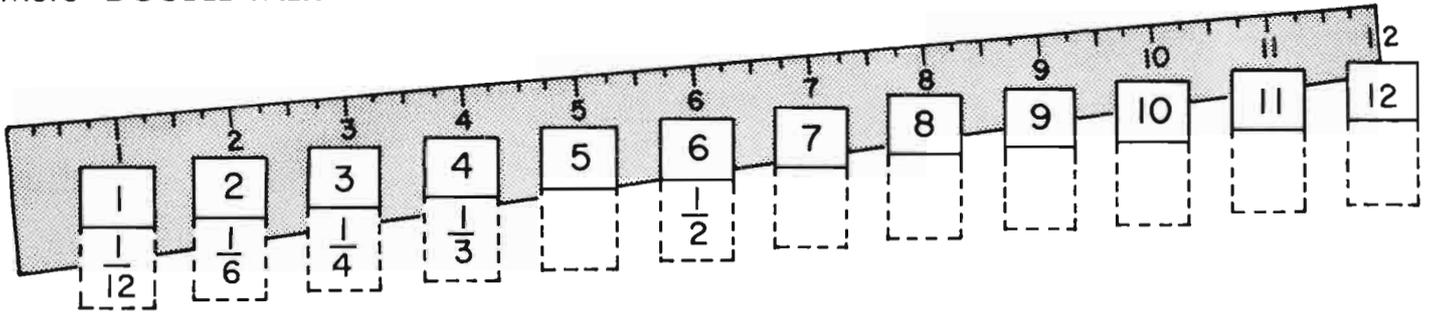
U.

$$\frac{8}{\quad} (\div 4) = \frac{\quad}{\quad}$$

V.

A.	G.	M.	R.	B.	H.	N.	S.	C.	I.	O.	T.	D.	J.	P.	U.	E.	K.	Q.	V.	F.	L.
$\frac{1}{2}$	$\frac{7}{8}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{3}{4}$	$\frac{15}{16}$	$\frac{7}{8}$	$\frac{1}{8}$	$\frac{3}{16}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{1}{4}$	$\frac{7}{16}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{3}{16}$	$\frac{9}{16}$	$\frac{1}{2}$	$\frac{3}{16}$	$\frac{1}{8}$	$\frac{5}{8}$	1

More "DOUBLE-TALK"



(fraction of 1 foot)

There are  inches  
in  foot

$\frac{1}{4}$  foot = 3 inches

$\frac{1}{2}$  ft. = \_\_\_\_\_ in.

$\frac{1}{6}$  ft. = \_\_\_\_\_ in.

$\frac{3}{4}$  foot = \_\_\_\_\_ inches

$\frac{1}{3}$  ft. = \_\_\_\_\_ in.

$\frac{5}{6}$  ft. = \_\_\_\_\_ in.

3 feet = \_\_\_\_\_ inches

$\frac{2}{3}$  ft. = \_\_\_\_\_ in.

$\frac{1}{12}$  ft. = \_\_\_\_\_ in.

+  =  in.  
 $\frac{1}{2}$  +  $\frac{1}{4}$  = \_\_\_\_\_ ft.

+  =  in.  
 $\frac{1}{2}$  +  $\frac{1}{6}$  = \_\_\_\_\_ ft.

+  =  in.  
 $\frac{1}{6}$  +  $\frac{1}{3}$  = \_\_\_\_\_ ft.

-  =  in.  
 $\frac{1}{3}$  -  $\frac{1}{4}$  = \_\_\_\_\_ ft.

-  =  in.  
 $\frac{3}{4}$  -  $\frac{1}{2}$  = \_\_\_\_\_ ft.

-  =  in.  
 $\frac{5}{6}$  -  $\frac{2}{3}$  = \_\_\_\_\_ ft.

(2x)  =  in.  
 $\frac{1}{4}$  = \_\_\_\_\_ ft.

(3x)  =  in.  
 $\frac{1}{6}$  = \_\_\_\_\_ ft.

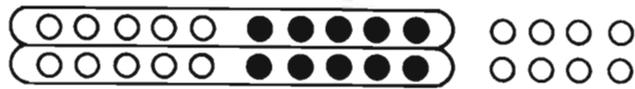
( $\div 2$ ) =  in.  
 $\frac{2}{3}$  = \_\_\_\_\_ ft.

( $\div 3$ ) =  in.  
 $\frac{1}{2}$  = \_\_\_\_\_ ft.

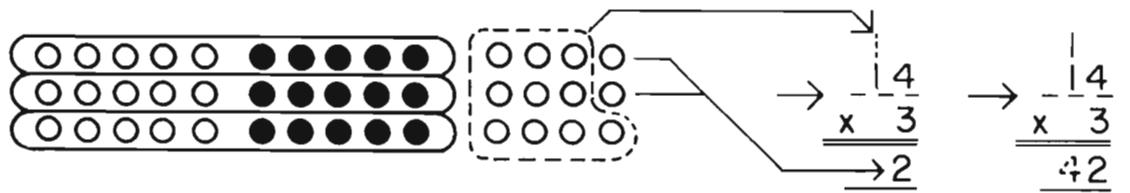


How do you feel ?

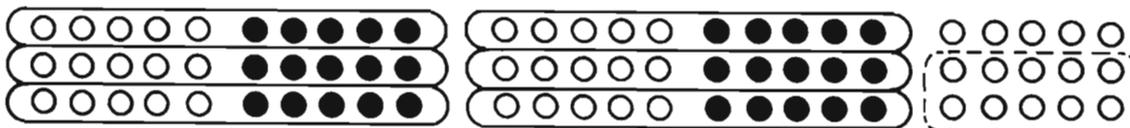
# BEANSTICK MULTIPLICATION



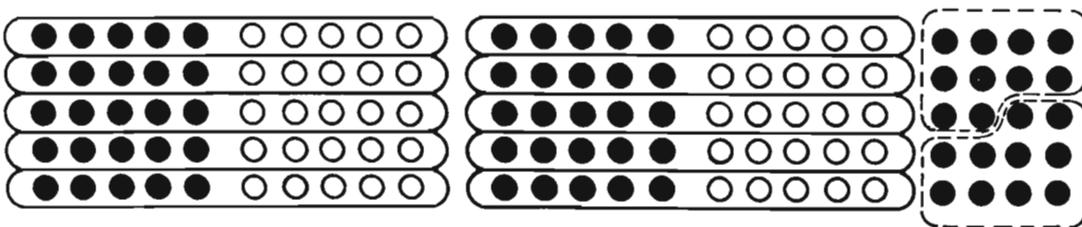
$$\begin{array}{r} 14 \\ \times 2 \\ \hline \end{array}$$



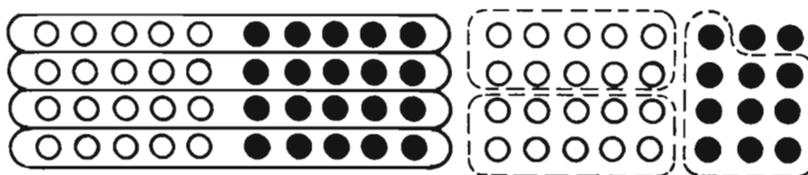
$$\begin{array}{r} 14 \\ \times 3 \\ \hline 42 \end{array}$$



$$\begin{array}{r} 25 \\ \times 3 \\ \hline 75 \end{array}$$



$$\begin{array}{r} 24 \\ \times 5 \\ \hline 120 \end{array}$$



$$\begin{array}{r} 18 \\ \times 4 \\ \hline 72 \end{array}$$

$$8 \quad (+7) \quad 64$$

Beanstick SHORTHAND

	— . . . . or   :: or . . . .
	— — . . . . or    :: or . . . .
	— — — . . or     :: or     :

Multiplication in Beanstick SHORTHAND

				$\begin{array}{r} 13 \\ \times 2 \\ \hline 26 \end{array}$			
				$\begin{array}{r} 14 \\ \times 3 \\ \hline 42 \end{array}$ A.			
			$\begin{array}{r} 21 \\ \times 4 \\ \hline \end{array}$ B.				$\begin{array}{r} \text{---} \\ \times 2 \\ \hline \text{---} \end{array}$ C.
			$\begin{array}{r} \text{---} \\ \times \\ \hline \text{---} \end{array}$				$\begin{array}{r} \text{---} \\ \times \\ \hline \text{---} \end{array}$ D.
			$\begin{array}{r} \text{---} \\ \times \\ \hline \text{---} \end{array}$				$\begin{array}{r} \text{---} \\ \times \\ \hline \text{---} \end{array}$ E.

A.	B.	C.	D.	E.
42	84	32	92	108

# BEANSTICK MULTIPLICATION in Shorthand

Please draw your own sketches.

$$\begin{array}{r} \underline{\underline{12}} \\ \times \underline{\underline{2}} \\ \hline \end{array} \quad \text{A.}$$

$$\begin{array}{r} \underline{\underline{21}} \\ \times \underline{\underline{3}} \\ \hline \end{array} \quad \text{B.}$$

$$\begin{array}{r} \underline{\underline{14}} \\ \times \underline{\underline{4}} \\ \hline \end{array} \quad \text{C.}$$

$$\begin{array}{r} \underline{\underline{12}} \\ \times \underline{\underline{5}} \\ \hline \end{array} \quad \text{D.}$$

$$\begin{array}{r} \underline{\underline{17}} \\ \times \underline{\underline{2}} \\ \hline \end{array} \quad \text{E.}$$

$$\begin{array}{r} \underline{\underline{19}} \\ \times \underline{\underline{3}} \\ \hline \end{array} \quad \text{F.}$$

$$\begin{array}{r} \underline{\underline{23}} \\ \times \underline{\underline{4}} \\ \hline \end{array} \quad \text{G.}$$

$$\begin{array}{r} \underline{\underline{16}} \\ \times \underline{\underline{5}} \\ \hline \end{array} \quad \text{H.}$$

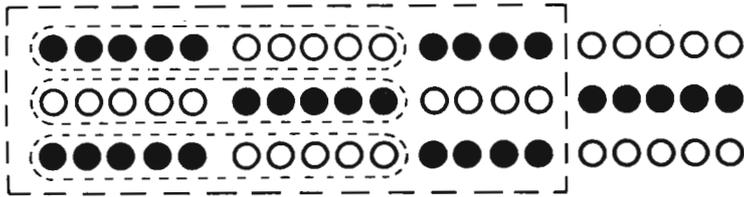
$$\begin{array}{r} \underline{\underline{18}} \\ \times \underline{\underline{3}} \\ \hline \end{array} \quad \text{I.}$$

$$\begin{array}{r} \underline{\underline{15}} \\ \times \underline{\underline{4}} \\ \hline \end{array}$$

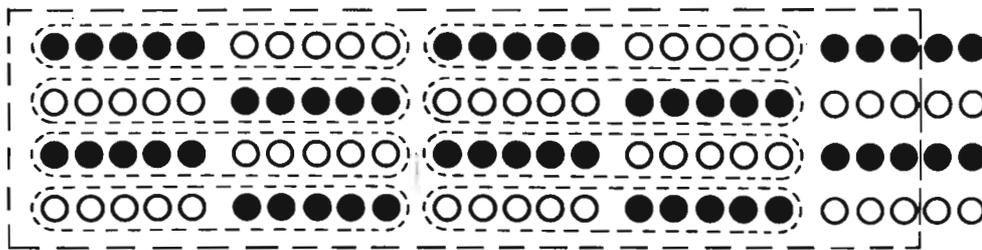
A.	B.	C.	D.	E.	F.	G.	H.	I.
24	54	48	60	24	37	92	80	43
14	63	56	50	34	57	82	70	54

A kind of BEANSTICK DIVISION

" 3 | 42 " means: Please show a rectangular arrangement of 42 beans in 3 rows.  
Then report the number of beans in each row.



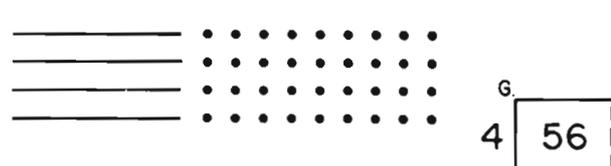
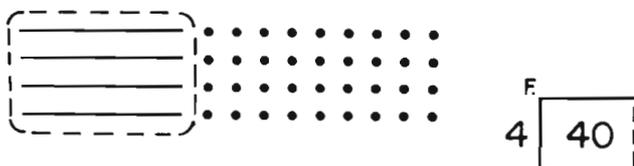
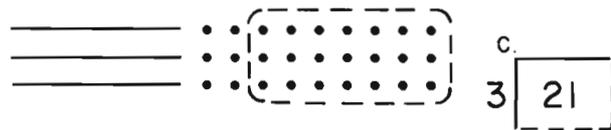
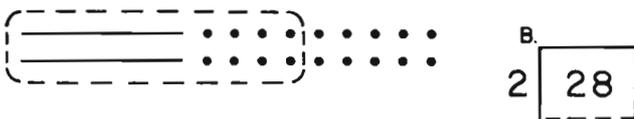
$$3 \overline{) 42}$$



A.

$$4 \overline{) 92}$$

Division in Beanstick SHORTHAND



A.	B.	C.	D.	E.	F.	G.
23	14	7	13	15	10	14

### FENCE ARITHMETIC

3	7	3	2
6	8	5	4
2	6	4	6
7	3	2	4

18's

A.          B.           
Total

7	3	8	3
8	9	2	8
4	6	3	6
7	8	6	7

19's

A.          B.           
Total

5	4	9	7
5	5	8	4
2	5	6	3
3	4	5	5

20's

A.          B.           
Total

### LOOP ARITHMETIC

4	4	4	4	4	4	4	4
4	4	4	4	4	4	4	4
4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5
5	5	5	5	5	5	5	5
5	5	5	5	5	5	5	5
17	18	19	12	15	21	16	23
C.	D.	C.	D.	C.	D.	C.	

### CHAIN REACTIONS

6 (+6) (+6) (+6) (+6) (+6) (+6) (+6) (+6) A.

70 (-7) (-7) (-7) (-7) (-7) (-7) (-7) (-7) B.

40 (+8) (+8) (+8) (+8) B.

90 (-9) (-9) (-9) (-9) A.

A.	B.	C.	D.
54	94	5,5,5	4,4,5,5
4	14	4,5,5,5	4,4,4
16	72	4,4,4,5	4,4,5,5,5
5	80	4,4,4,4	4,4,4,4,5

MORE BEANSTICK DIVISION in Shorthand

Please describe the arrangements shown.

A.	D.	G.	B.	E.	H.	C.	F.	I.
$\begin{array}{r} 17 \\ 2 \overline{)34} \end{array}$	$\begin{array}{r} \\ 4 \overline{)48} \end{array}$	$\begin{array}{r} 19 \\ 4 \overline{)76} \end{array}$	$\begin{array}{r} 8 \\ 3 \overline{)24} \end{array}$	$\begin{array}{r} 24 \\ 3 \overline{)72} \end{array}$	$\begin{array}{r} \\ \overline{)108} \end{array}$	$\begin{array}{r} 20 \\ 3 \overline{)60} \end{array}$	$\begin{array}{r} 25 \\ 4 \overline{) } \end{array}$	$\begin{array}{r} 25 \\ 5 \overline{) } \end{array}$

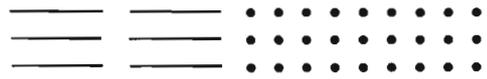
More BEANSTICK DIVISION in Shorthand

Please draw the arrangements indicated.



3 39 <sup>A.</sup>

Then complete the report.



3 42 <sup>B.</sup>



3 63 <sup>C.</sup>



3 51 <sup>D.</sup>



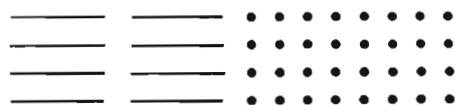
4 48 <sup>E.</sup>



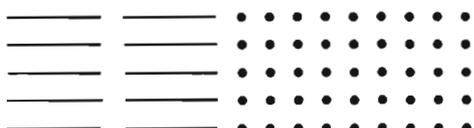
4 32 <sup>F.</sup>



4 56 <sup>G.</sup>



4 100 <sup>H.</sup>



5 65 <sup>I.</sup>



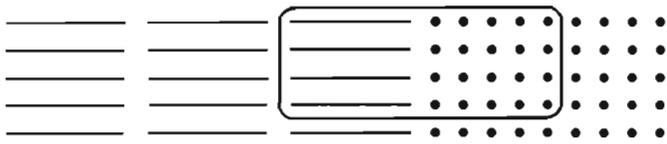
5 110 <sup>J.</sup>

or

A.	B.	C.	D.	E.	F.	G.	H.	I.	J.
12	16	21	22	12	18	24	25	13	24
13	14	29	17	23	8	14	40	15	22

BEANSTICK MULTIPLICATION and DIVISION . . . and Related Examples

Please complete the report.



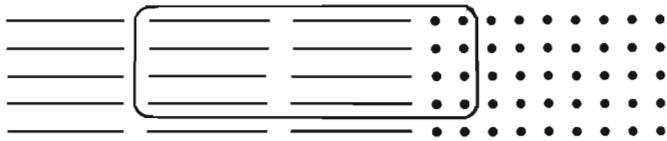
$$4 \overline{) 60} \text{ A.}$$

$$4 \overline{) 56} \text{ B.}$$

$$4 \overline{) 60} \text{ C.}$$

$$8 \overline{) 56} \text{ D.}$$

$$4 \overline{) 120} \text{ E.}$$



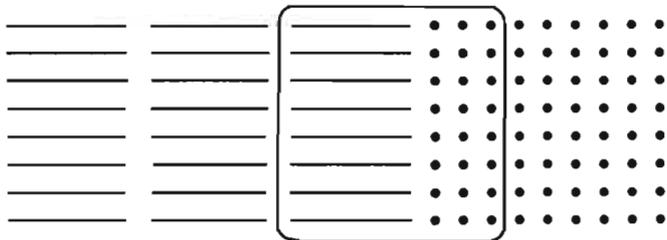
$$4 \overline{) \quad} \text{ F. G.}$$

$$4 \overline{) 84} \text{ H.}$$

$$4 \overline{) 92} \text{ I.}$$

$$4 \overline{) 44} \text{ J.}$$

$$4 \overline{) 80} \text{ K.}$$



$$8 \overline{) \quad} \text{ L. M.}$$

$$8 \overline{) 112} \text{ N.}$$

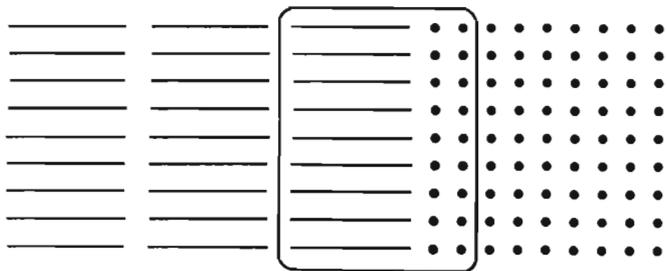
$$8 \overline{) 96} \text{ O.}$$

$$14 \overline{) 112} \text{ P.}$$

$$12 \overline{) 96} \text{ Q.}$$

$$13 \overline{) 104} \text{ R.}$$

$$4 \overline{) 104} \text{ S.}$$



$$\overline{) \quad} \text{ T. U.}$$

$$9 \overline{) 117} \text{ V.}$$

$$12 \overline{) 108} \text{ W.}$$

$$13 \overline{) 117} \text{ X.}$$

$$9 \overline{) 99}$$

$$9 \overline{) 54}$$

$$6 \overline{) 54}$$

A.	B.	C.	D.	E.	F.	G.	H.	I.	J.	K.	L.	M.	N.	O.	P.	Q.	R.	S.	T.	U.	V.	W.	X.
15	14	13	7	16	32	24	21	23	11	20	13	104	12	12	12	12	12	26	9	108	13	9	8
16	17	15	9	30	22	88	22	24	22	19	23	108	14	13	8	8	8	21	12	11	12	8	9

BEANSTICK MULTIPLICATION and DIVISION . . . and Related Examples

Please draw the sketches and complete the report.



$$2 \overline{) 70} \text{ A}$$

$$2 \overline{) 72} \text{ B}$$

$$2 \overline{) 68} \text{ C}$$

$$35 \overline{) 70} \text{ D}$$

$$2 \overline{) 140} \text{ E}$$



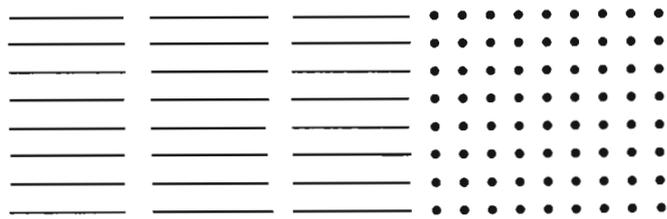
$$4 \overline{) 60} \text{ F}$$

$$4 \overline{) 68} \text{ G}$$

$$4 \overline{) 52} \text{ H}$$

$$13 \overline{) 52} \text{ I}$$

$$15 \overline{) 60} \text{ J}$$



$$5 \overline{) 130} \text{ K}$$

$$5 \overline{) 135} \text{ L}$$

$$5 \overline{) 140} \text{ M}$$

$$5 \overline{) 65} \text{ N}$$

$$13 \overline{) 65} \text{ O}$$

$$27 \overline{) 135} \text{ P}$$

$$26 \overline{) 130} \text{ Q}$$



$$6 \overline{) 198} \text{ V}$$

$$6 \overline{) 192} \text{ R}$$

$$6 \overline{) 186} \text{ S}$$

$$6 \overline{) 180} \text{ T}$$

$$6 \overline{) 90} \text{ U}$$

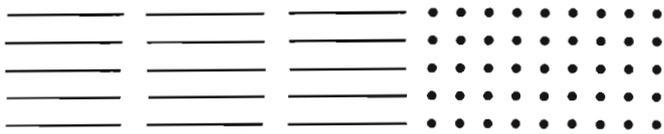
$$12 \overline{) 180} \text{ U}$$

$$33 \overline{) 198} \text{ V}$$

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
35	36	37	4	70	17	17	13	11	12	26	27	28	12	7	15	5	32	31	29	14	33
32	33	34	2	35	15	15	16	4	4	29	28	27	13	5	5	4	28	29	30	15	6

BEANSTICK MULTIPLICATION and DIVISION . . . and Related Examples

Please draw the sketches and complete the report.



$$5 \overline{) 80} \quad \text{A.}$$

$$10 \overline{) 80} \quad \text{B.}$$

$$5 \overline{) 85} \quad \text{C.}$$

$$5 \overline{) 75} \quad \text{D.}$$

$$5 \overline{) 160} \quad \text{E.}$$



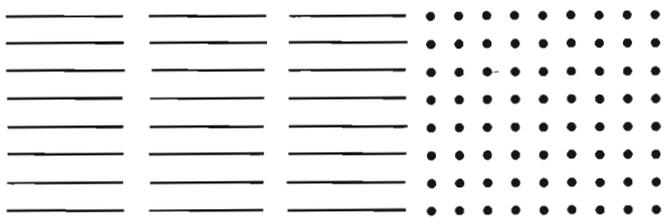
$$3 \overline{) 87} \quad \text{F.}$$

$$3 \overline{) 90} \quad \text{G.}$$

$$6 \overline{) 90} \quad \text{H.}$$

$$29 \overline{) 87} \quad \text{I.}$$

$$15 \overline{) 90} \quad \text{J.}$$



$$8 \overline{) 176} \quad \text{K.}$$

$$8 \overline{) 184} \quad \text{L.}$$

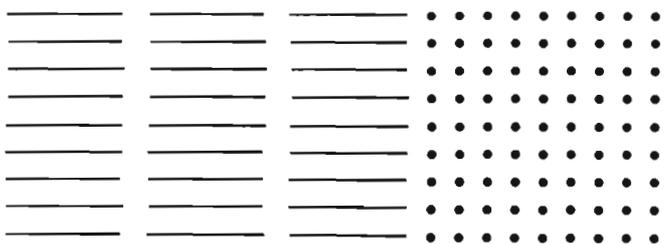
$$8 \overline{) 168} \quad \text{M.}$$

$$8 \overline{) 160} \quad \text{N.}$$

$$8 \overline{) 152} \quad \text{O.}$$

$$16 \overline{) 160} \quad \text{P.}$$

$$19 \overline{) 152} \quad \text{Q.}$$



$$9 \overline{) 126} \quad \text{R.}$$

$$9 \overline{) 135} \quad \text{S.}$$

$$9 \overline{) 117} \quad \text{T.}$$

$$9 \overline{) 108} \quad \text{U.}$$

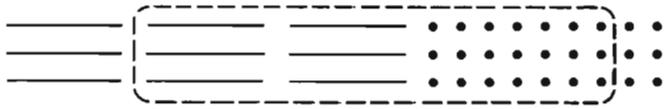
$$9 \overline{) 99} \quad \text{V.}$$

$$12 \overline{) 120}$$

$$12 \overline{) 132}$$

A.	B.	C.	D.	E.	F.	G.	H.	I.	J.	K.	L.	M.	N.	O.	P.	Q.	R.	S.	T.	U.	V.
18	8	17	14	32	30	15	15	3	6	23	22	21	20	19	11	8	14	14	13	10	11
16	7	18	15	30	29	30	3	6	8	22	23	24	25	18	10	7	15	15	15	12	12

BEANSTICK MULTIPLICATION and DIVISION . . . and Related Examples



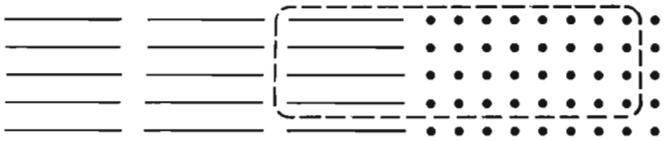
$$3 \overline{) 27}$$

$$3 \overline{) 87}$$

$$3 \overline{) 78}$$

$$4 \overline{) 27}$$

$$27 \overline{) 81}$$



$$4 \overline{) 72}$$

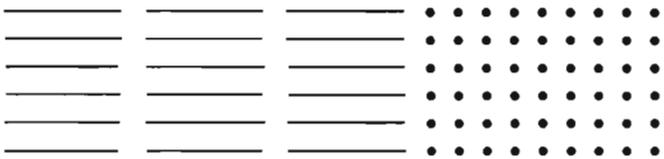
$$4 \overline{) 76}$$

$$4 \overline{) 68}$$

$$2 \overline{) 72}$$

$$8 \overline{) 72}$$

Please draw your own sketches.



$$6 \overline{) 24}$$

$$6 \overline{) 150}$$

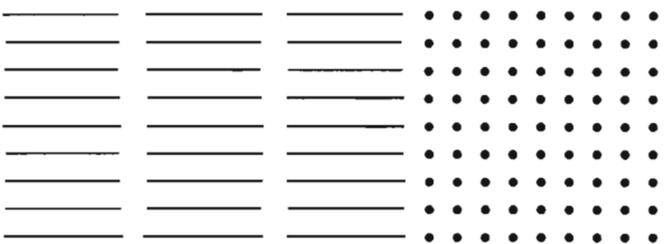
$$3 \overline{) 150}$$

$$6 \overline{) 72}$$

$$6 \overline{) 13}$$

$$6 \overline{) 180}$$

$$6 \overline{) 192}$$



$$6 \overline{) 210}$$

$$6 \overline{) 204}$$

$$6 \overline{) 36}$$

$$3 \overline{) 204}$$

$$6 \overline{) 108}$$

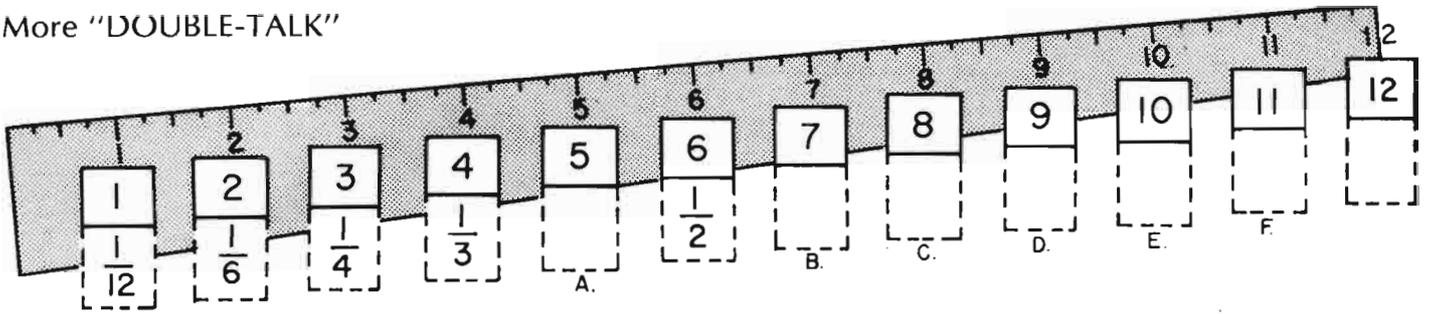
$$3 \overline{) 34}$$

$$6 \overline{) 432}$$



How do you feel ?

More "DOUBLE-TALK"



There are  $\boxed{12}$  inches  
in  $\boxed{1}$  foot

15		21		27	30
$1\frac{1}{4}$	$1\frac{1}{2}$		2		

36			H.
3	4	5	6

$\frac{1}{4}$  foot =  $\boxed{3}$  inches  
 $\frac{3}{4}$  foot = \_\_\_\_\_ inches  
 3 feet =  $\boxed{36}$  inches

$\frac{1}{2}$  foot = \_\_\_\_\_ inches  
 $\frac{1}{3}$  foot = \_\_\_\_\_ inches  
 $\frac{2}{3}$  foot =  $\boxed{8}$  inches

$1\frac{1}{4}$  foot =  $\boxed{15}$  inches  
 $2\frac{1}{2}$  feet = \_\_\_\_\_ inches  
 $\frac{1}{12}$  foot = \_\_\_\_\_ inch

$$\frac{\boxed{1}}{3} + \frac{\boxed{1}}{6} = \frac{\boxed{1}}{2}$$

$$\frac{12}{1} + \frac{24}{2} = \frac{\boxed{36}}{1}$$

$$\frac{\boxed{3}}{4} + \frac{\boxed{3}}{4} = \frac{\boxed{6}}{4}$$

$$\frac{\boxed{2}}{1} - \frac{\boxed{1}}{2} = \frac{\boxed{3}}{2}$$

$$\frac{\boxed{3}}{1} - \frac{\boxed{1}}{2} = \frac{\boxed{5}}{2}$$

$$\frac{\boxed{1}}{1} - \frac{\boxed{2}}{3} = \frac{\boxed{1}}{3}$$

$$(3 \times) \frac{\boxed{1}}{2} = \frac{\boxed{3}}{2}$$

$$(2 \times) \frac{\boxed{1}}{2} = \frac{\boxed{2}}{2}$$

$$(5 \times) \frac{\boxed{1}}{4} = \frac{\boxed{5}}{4}$$

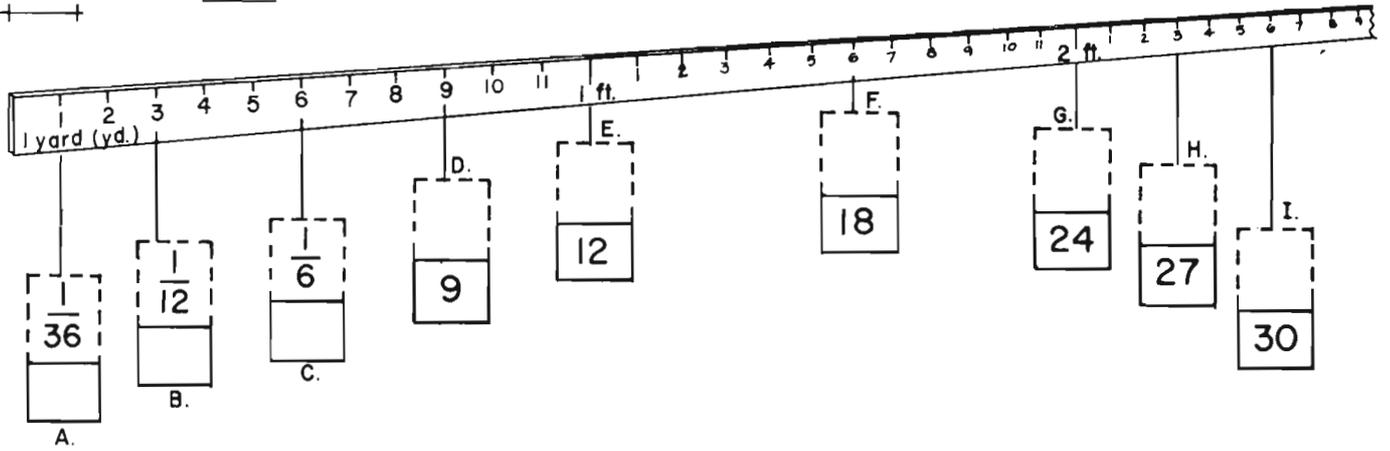
$$\frac{\boxed{1}}{1} (\div 3) = \frac{\boxed{1}}{3}$$

$$\frac{\boxed{2}}{1} (\div 3) = \frac{\boxed{2}}{3}$$

$$\frac{\boxed{1}}{2} (\div 2) = \frac{\boxed{1}}{4}$$

A.	I	P.	B.	J.	Q.	C.	K.	R.	D.	L.	S.	E.	M.	T.	F.	N.	U.	G.	O.	V.	H.
$\frac{5}{12}$	36	$1\frac{1}{2}$	$\frac{7}{12}$	8	$\frac{1}{3}$	$\frac{2}{3}$	15	$1\frac{1}{2}$	$\frac{3}{4}$	$1\frac{1}{2}$	3	$\frac{5}{6}$	3	$1\frac{1}{4}$	$\frac{11}{12}$	$1\frac{1}{2}$	$\frac{1}{3}$	$2\frac{1}{4}$	$1\frac{1}{2}$	$\frac{2}{3}$	72

1 yard is 36 inches



$\frac{1}{18}$	$\frac{1}{9}$	$\frac{2}{9}$	$\frac{4}{9}$	$\frac{5}{9}$	$\frac{7}{9}$	$\frac{8}{9}$	$\frac{5}{12}$	$\frac{7}{12}$	$\frac{11}{12}$	$\frac{5}{36}$	$\frac{7}{36}$	$\frac{11}{36}$	$\frac{13}{36}$
J.	K.						L.			M.			

$$\frac{3}{4} - \frac{1}{2} = \quad \text{N.}$$

$$\frac{2}{3} - \frac{1}{3} = \quad$$

$$1 - \frac{1}{9} = \quad \text{O.}$$

$$\frac{2}{9} + \frac{5}{9} = \quad$$

$$\frac{7}{36} + \frac{11}{36} = \quad \text{P.}$$

$$\frac{2}{3} + \frac{1}{6} = \quad$$

$$\frac{1}{6} - \frac{1}{12} = \quad \text{Q.}$$

$$\frac{1}{6} + \frac{1}{4} = \quad \text{R.}$$

$$\frac{1}{18} - \frac{1}{36} = \quad$$

$$\frac{1}{2} (\div 2) = \quad \text{S.}$$

$$\frac{8}{9} (\div 2) = \quad \text{T.}$$

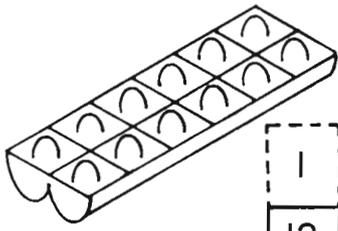
$$\frac{1}{9} (\div 2) = \quad \text{U.}$$

$$\left(\frac{1}{2} \text{ of}\right) \frac{1}{3} = \quad \text{V.}$$

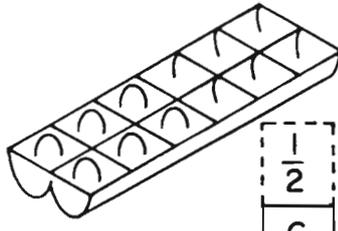
$$\left(\frac{1}{2} \text{ of}\right) \frac{2}{3} = \quad \text{W.}$$

$$\left(\frac{1}{2} \text{ of}\right) \frac{1}{2} = \quad$$

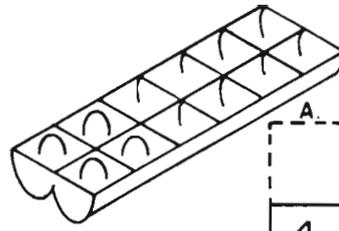
A.	B.	C.	D.	E.	F.	G.	H.	I.	J.	K.	L.	M.	N.	O.	P.	Q.	R.	S.	T.	U.	V.	W.
1	4	5	$\frac{1}{3}$	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{2}{4}$	$\frac{3}{5}$	$\frac{5}{6}$	9	4	15	6	$\frac{1}{4}$	8	$\frac{1}{2}$	$\frac{2}{24}$	$\frac{5}{12}$	$\frac{1}{4}$	$\frac{10}{9}$	$\frac{2}{9}$	$\frac{1}{6}$	$\frac{1}{3}$
2	3	6	$\frac{1}{4}$	$\frac{1}{3}$	18	$\frac{2}{3}$	$\frac{3}{4}$	$\frac{2}{15}$	2	2	10	5	$\frac{2}{8}$	$\frac{8}{9}$	$\frac{18}{16}$	$\frac{1}{12}$	$\frac{2}{16}$	$\frac{2}{2}$	$\frac{4}{9}$	$\frac{1}{18}$	$\frac{2}{3}$	$\frac{2}{6}$



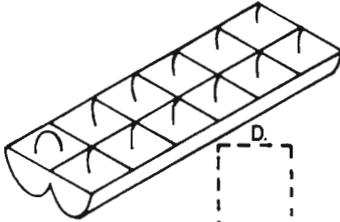
1 dozen  
12 eggs



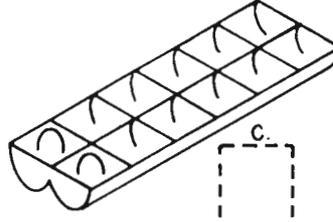
$\frac{1}{2}$  doz.  
6 eggs



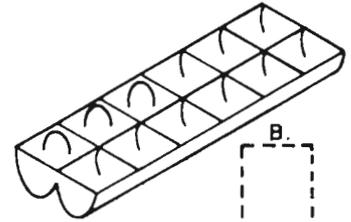
A.  
4



D.  
1



C.  
2



B.  
3

$\frac{2}{3}$	$\frac{3}{4}$	$\frac{5}{6}$	$\frac{5}{12}$	$\frac{7}{12}$	$\frac{11}{12}$	I.				J.		K.	
						13	14	15	16	17	18	19	20

$\frac{3}{4} + \frac{3}{4} =$  L.

$\frac{7}{12} + \frac{5}{12} =$  M.

$1 + \frac{2}{3} =$

$1 - \frac{2}{3} =$  N.

$\frac{1}{2} - \frac{5}{6} =$  O.

$\frac{1}{4} - \frac{1}{2} =$

$\frac{11}{12} + \frac{1}{12} =$  P.

$\frac{11}{12} - \frac{5}{12} =$  Q.

$\frac{1}{3} + \frac{1}{6} =$

$(2 \times) \frac{1}{12} =$  R.

$(3 \times) \frac{1}{2} =$  S.

$(4 \times) \frac{1}{12} =$

$\frac{1}{2} (\div 6) =$  T.

$\frac{1}{3} (\div 8) =$  U.

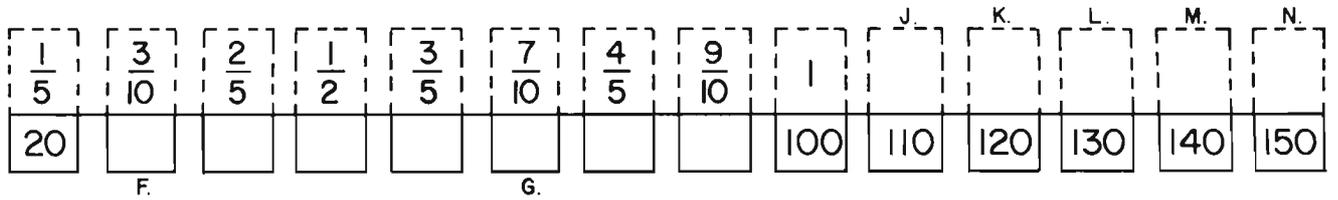
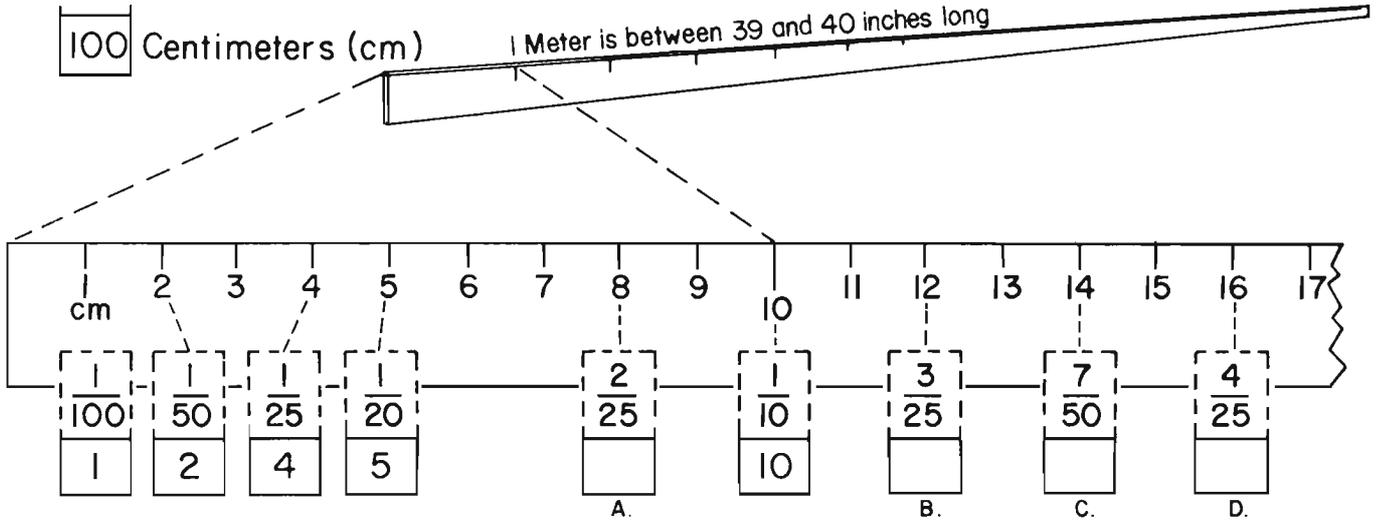
$1\frac{1}{2} (\div 6) =$

A.	B.	C.	D.	E.	F.	G.	H.	I.	J.	K.	L.	M.	N.	O.	P.	Q.	R.	S.	T.	U.
$\frac{4}{3}$	$\frac{1}{4}$	$\frac{1}{12}$	$\frac{1}{8}$	11	5	7	13	$\frac{1}{12}$	$\frac{5}{12}$	$\frac{11}{12}$	$\frac{1}{2}$	1	$\frac{1}{3}$	$\frac{4}{6}$	$\frac{12}{12}$	$\frac{1}{2}$	$\frac{1}{6}$	$\frac{1}{2}$	$\frac{1}{8}$	$\frac{1}{5}$
$\frac{1}{3}$	$\frac{1}{2}$	$\frac{1}{6}$	$\frac{1}{12}$	10	7	10	11	$\frac{6}{12}$	$\frac{7}{12}$	$\frac{7}{12}$	$\frac{1}{4}$	$\frac{12}{12}$	$\frac{5}{6}$	$\frac{2}{3}$	1	$\frac{6}{12}$	$\frac{2}{12}$	$\frac{3}{2}$	$\frac{1}{12}$	$\frac{1}{6}$

1 Meter (M)

100 Centimeters (cm)

1 Meter is between 39 and 40 inches long



$$\frac{1}{5} + \frac{1}{5} = \square$$

O.

$$\frac{7}{10} + \frac{7}{10} = \square$$

P.

$$\frac{1}{100} + \frac{1}{100} = \square$$

Q.

$$\frac{1}{20} - \frac{1}{25} = \square$$

R.

$$1 - \frac{7}{10} = \square$$

$$\frac{9}{10} - \frac{4}{5} = \square$$

$$\frac{1}{2} - \frac{1}{10} = \square$$

S.

$$\frac{1}{10} + \frac{9}{10} = \square$$

$$\frac{53}{100} - \frac{3}{100} = \square$$

T.

$$(10 \times) \frac{1}{10} = \square$$

U.

$$(7 \times) \frac{1}{5} = \square$$

H.

$$(3 \times) \frac{3}{10} = \square$$

V.

$$\left(\frac{1}{3} \text{ of}\right) \frac{9}{10} = \square$$

E.

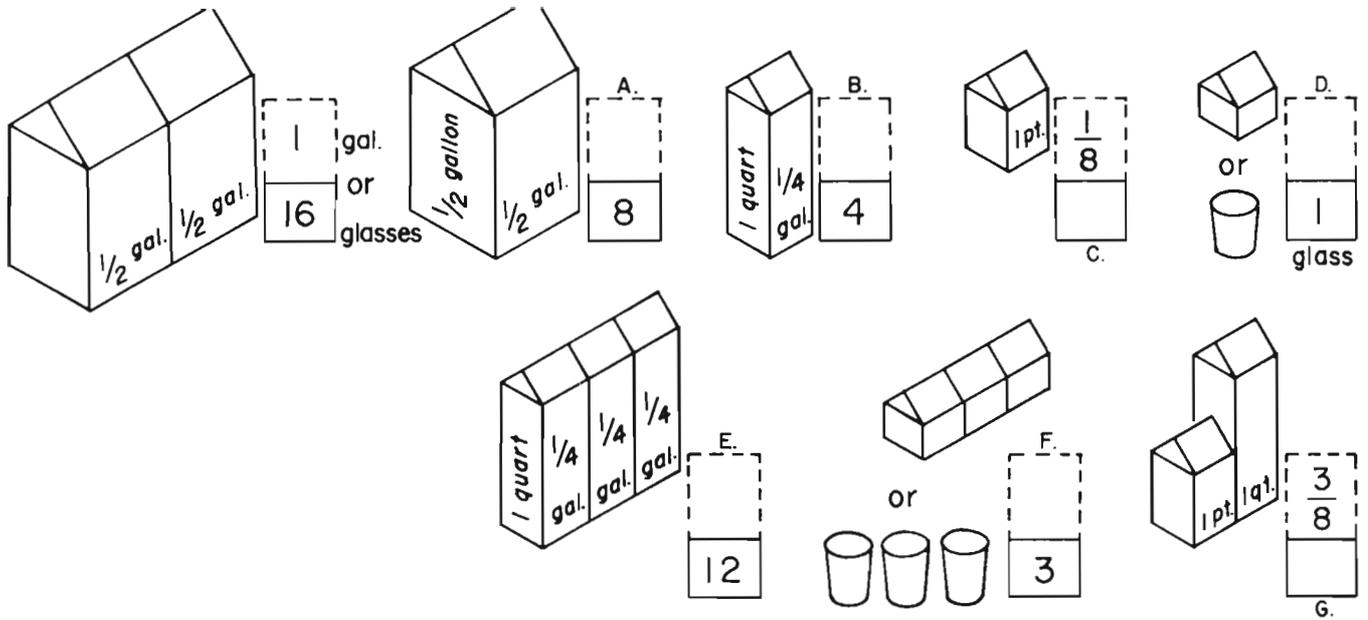
$$\left(\frac{1}{4} \text{ of}\right) \frac{2}{25} = \square$$

W.

$$\left(\frac{1}{5} \text{ of}\right) \frac{1}{2} = \square$$

I.

A.	B.	C.	D.	E.	F.	G.	H.	I.	J.	K.	L.	M.	N.	O.	P.	Q.	R.	S.	T.	U.	V.	W.
2	22	14	16	$\frac{3}{10}$	30	17	$1\frac{2}{5}$	$\frac{2}{7}$	$1\frac{1}{10}$	$1\frac{1}{5}$	$\frac{10}{13}$	$1\frac{2}{5}$	$1\frac{1}{2}$	$\frac{2}{10}$	$1\frac{2}{5}$	$\frac{1}{50}$	$\frac{1}{100}$	$\frac{4}{10}$	$\frac{50}{100}$	1	$\frac{7}{5}$	$\frac{1}{50}$
8	12	57	29	$\frac{10}{27}$	13	70	$\frac{7}{5}$	$\frac{1}{10}$	$\frac{1}{10}$	$1\frac{2}{10}$	$1\frac{3}{10}$	$1\frac{4}{10}$	$1\frac{5}{10}$	$\frac{2}{5}$	$\frac{14}{10}$	$\frac{2}{100}$	$\frac{1}{5}$	$\frac{2}{5}$	$\frac{1}{2}$	$\frac{10}{10}$	$\frac{9}{10}$	$\frac{2}{100}$



$\frac{5}{16}$	$\frac{7}{16}$	$\frac{9}{16}$	$\frac{11}{16}$	$\frac{13}{16}$	$\frac{15}{16}$	$\frac{3}{8}$	$\frac{5}{8}$	$\frac{7}{8}$	$1\frac{1}{8}$	N.				
									18	20	22	24	26	
H.	I.					J.			M.					

$$1 + \frac{3}{4} = \square$$

O.

$$\frac{5}{8} + \frac{3}{8} = \square$$

$$\frac{3}{16} + \frac{5}{16} = \square$$

P.

$$1 - \frac{3}{4} = \square$$

$$\frac{7}{8} - \frac{3}{8} = \square$$

Q.

$$1\frac{1}{2} - \frac{3}{4} = \square$$

$$\frac{7}{8} + \frac{3}{4} = \square$$

R.

$$\frac{3}{4} - \frac{1}{16} = \square$$

S.

$$\frac{1}{4} + 1\frac{1}{4} = \square$$

$$(2 \times) \frac{3}{8} = \square$$

T.

$$(4 \times) \frac{1}{8} = \square$$

L.

$$(5 \times) \frac{3}{16} = \square$$

U.

$$\frac{15}{16} (\div 3) = \square$$

V.

$$1\frac{1}{8} (\div 3) = \square$$

W.

$$\frac{1}{2} (\div 4) = \square$$

K.

A.	B.	C.	D.	E.	F.	G.	H.	I.	J.	K.	L.	M.	N.	O.	P.	Q.	R.	S.	T.	U.	V.	W.
$\frac{1}{8}$	$\frac{4}{8}$	2	$\frac{1}{8}$	$\frac{3}{4}$	$\frac{1}{2}$	4	5	7	5	$\frac{1}{8}$	$\frac{4}{8}$	18	$\frac{2}{4}$	$\frac{7}{4}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{13}{8}$	$\frac{11}{16}$	$\frac{3}{4}$	$\frac{15}{16}$	$\frac{5}{16}$	$\frac{3}{8}$
$\frac{1}{2}$	$\frac{1}{4}$	8	$\frac{1}{16}$	$\frac{1}{3}$	$\frac{3}{16}$	6	8	9	6	$\frac{2}{4}$	$\frac{1}{2}$	10	$\frac{1}{4}$	$\frac{3}{4}$	$\frac{8}{16}$	$\frac{4}{8}$	$\frac{5}{8}$	$\frac{4}{8}$	$\frac{6}{8}$	$\frac{8}{16}$	$\frac{3}{16}$	$\frac{9}{8}$

Please complete the tables.

There are 12 inches in 1 foot

ft.	$\frac{1}{12}$	$\frac{1}{6}$	$\frac{1}{4}$	$\frac{1}{3}$	$\frac{2}{3}$	$\frac{1}{2}$	$\frac{5}{6}$	$\frac{2}{3}$	$\frac{3}{4}$	$\frac{7}{12}$	$\frac{1}{2}$	$\frac{1}{3}$
in.	12											

There are 60 minutes in 1 hour.

hr.	$\frac{1}{60}$	$\frac{1}{30}$	$\frac{1}{20}$	$\frac{1}{15}$	$\frac{2}{15}$	$\frac{1}{10}$	$\frac{1}{6}$	$\frac{1}{5}$	$\frac{2}{5}$	$\frac{3}{5}$	$\frac{4}{5}$	$\frac{5}{6}$	$\frac{3}{4}$
m.	60												

There are 100 cents in 1 dollar.

\$	$\frac{1}{100}$	$\frac{1}{50}$	$\frac{1}{25}$	$\frac{2}{25}$	$\frac{1}{10}$	$\frac{2}{10}$	$\frac{3}{10}$	$\frac{4}{10}$	$\frac{5}{10}$	$\frac{6}{10}$	$\frac{7}{10}$	$\frac{8}{10}$	$\frac{9}{10}$
¢	100												

$$\frac{1}{3} + \frac{1}{6} = \boxed{\phantom{00}}$$

$$\frac{3}{4} + \frac{3}{4} = \boxed{\phantom{00}}$$

$$\frac{1}{6} + \frac{5}{6} = \boxed{\phantom{00}}$$

$$\frac{3}{4} - \frac{1}{4} = \boxed{\phantom{00}}$$

$$\frac{1}{2} - \frac{1}{5} = \boxed{\phantom{00}}$$

$$\frac{2}{3} - \frac{1}{2} = \boxed{\phantom{00}}$$

$$\frac{2}{3} + \frac{2}{3} = \boxed{\phantom{00}}$$

$$\frac{3}{4} - \frac{1}{6} = \boxed{\phantom{00}}$$

$$\frac{7}{10} + \frac{1}{10} = \boxed{\phantom{00}}$$

$$(5 \times) \frac{1}{10} = \boxed{\phantom{00}}$$

$$(2 \times) \frac{3}{4} = \boxed{\phantom{00}}$$

$$\frac{2}{5} (\div 2) = \boxed{\phantom{00}}$$

$$\frac{5}{6} (\div 2) = \boxed{\phantom{00}}$$

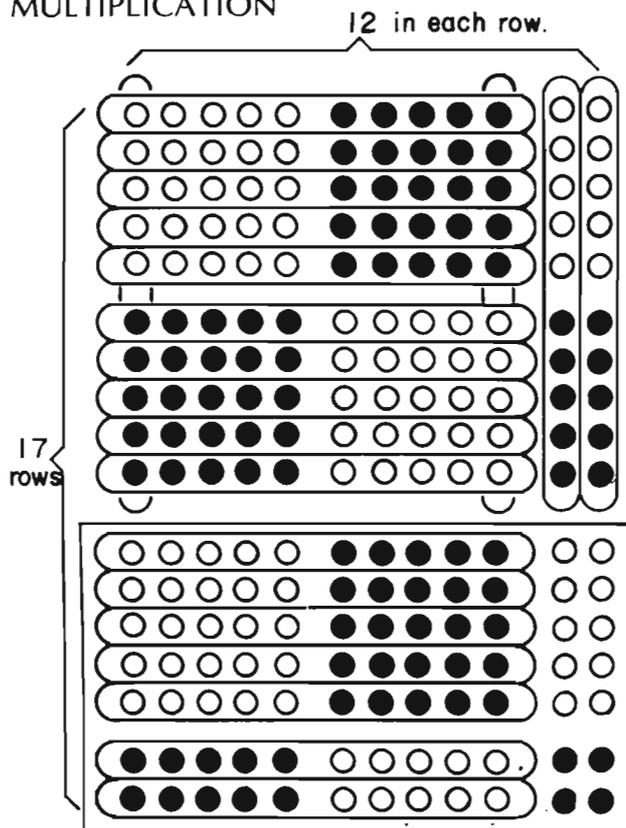


How do you feel ?

Rafts of 100 Pennies . . . Sticks with 10 Pennies . . . and Loose Pennies  
 . . . all arranged neatly in Rows and Columns.

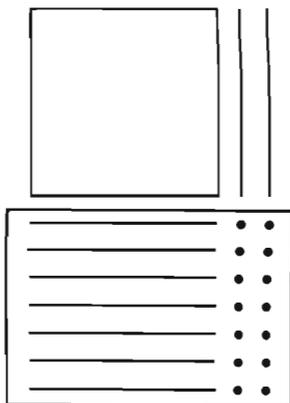
How many pennies altogether? How many rows? How many in each row?

MULTIPLICATION



How many pennies?

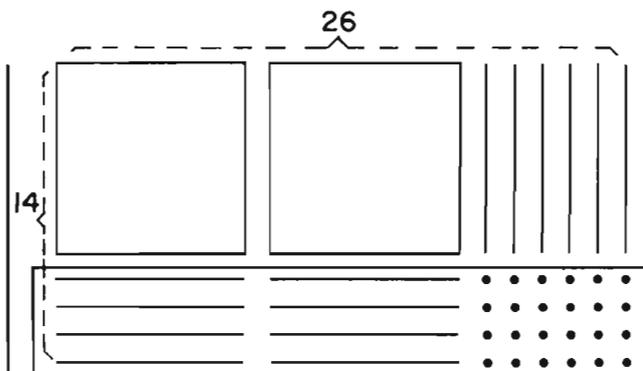
A shorthand sketch -



12 in a row  
 $\times 17$  rows  
 --- 84 in box  
 --- 120 out of box  
 --- Total

A. \_\_\_\_\_  
 and  
 12  
 17 B.

A.	B.	C.	D.	E.	F.	G.	H.	I.	J.	K.	L.
194	204	104	260	310	308	364	364	81	540	126	612
204	194	204	206	364	364	312	210	30	440	621	621



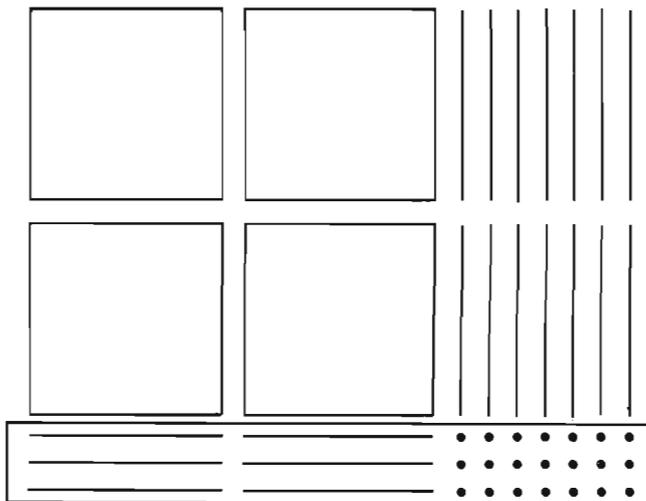
26 in a row  
 $\times 14$  rows also  $\times 26$

C. \_\_\_\_\_ in box F. \_\_\_\_\_

D. \_\_\_\_\_ out of box

E. \_\_\_\_\_ Total

14 26 G. 14 H.



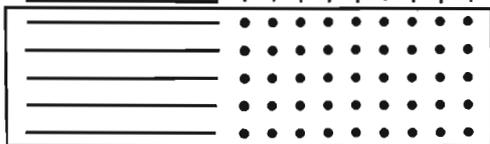
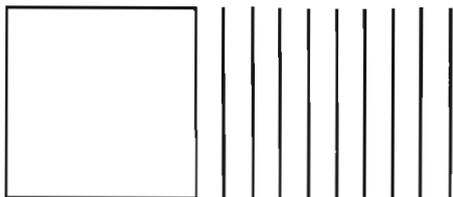
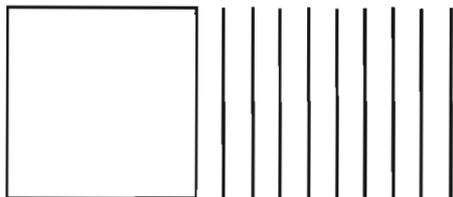
27 in a row  
 $\times 23$  rows  $\rightarrow$  also  $\rightarrow \times 27$

I. \_\_\_\_\_ in box L. \_\_\_\_\_

J. \_\_\_\_\_ out of box

K. \_\_\_\_\_ Total

23 27 27 23



19 in a row                      25  
x 25 rows                      x 19

A. \_\_\_\_\_ in box                      \_\_\_\_\_

B. \_\_\_\_\_ out of box

C. \_\_\_\_\_ Total                      19                      25  
    25                       19

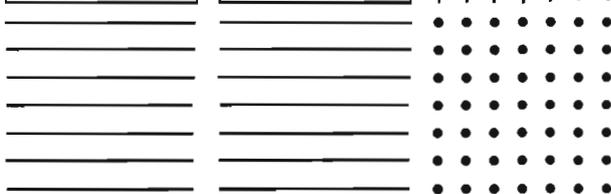
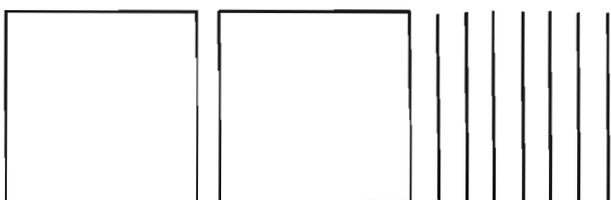


29 in a row                      13  
x 13 rows                      x 29

D. \_\_\_\_\_ in box                      \_\_\_\_\_

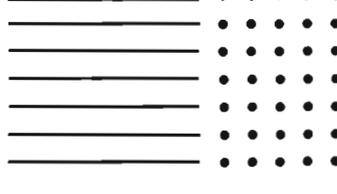
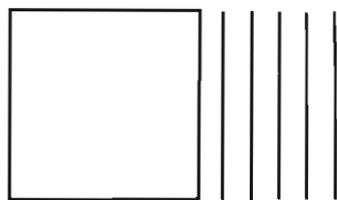
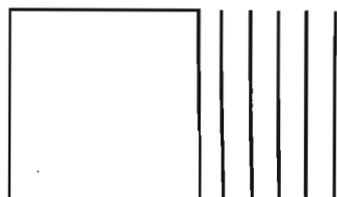
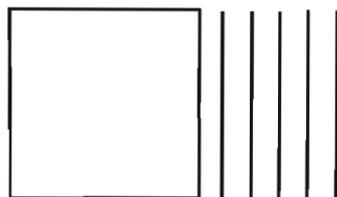
E. \_\_\_\_\_ out of box

F. \_\_\_\_\_ Total                      29                      13  
    13                       29



x 27

\_\_\_\_\_ and \_\_\_\_\_  
 \_\_\_\_\_  
 G. \_\_\_\_\_



15                      36  
x 36                      and                      x 15

\_\_\_\_\_ and \_\_\_\_\_  
 \_\_\_\_\_  
 H. \_\_\_\_\_                      15                      36  
    36                       15

A.	B.	C.	D.	E.	F.	G.	H.
85	95	380	280	365	475	78	87
290	280	367	377	629	729	540	490

$x \underline{37}$   
 ----- B.  
 ===== C.  
 ----- D.

$\underline{44}$   
 $x \underline{\quad}$  E.      and       $x \underline{44}$   
 ----- F.  
 =====  
 ----- F.       $\underline{44}$   
     $\underline{\quad}$  F.     $44$      $\underline{\quad}$  E.

$\underline{37}$   
 $x \underline{\quad}$   
 ----- D.       $37 \underline{\quad}$  A.

$x \underline{16}$     and     $x \underline{\quad}$   
 -----  
 =====  
 -----     $16 \underline{\quad}$      $\underline{\quad}$

$x \underline{\quad}$     and     $x \underline{\quad}$   
 ----- G.  
 =====  
 ----- G.     $\underline{\quad}$      $\underline{\quad}$

A.	B.	C.	D.	E.	F.	G.							
37	13	91	71	390	380	76	481	23	24	1102	1012	848	884

BUILDING and USING TABLES

$\begin{array}{r} 0 \\ \times 6 \\ \hline 0 \end{array}$	$\begin{array}{r} 1 \\ \times 6 \\ \hline 6 \end{array}$	$\begin{array}{r} 2 \\ \times 6 \\ \hline 12 \end{array}$	$\begin{array}{r} 3 \\ \times 6 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ \times 6 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ \times 6 \\ \hline \end{array}$	$\begin{array}{r} 6 \\ \times 6 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ \times 6 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ \times 6 \\ \hline \end{array}$	$\begin{array}{r} 9 \\ \times 6 \\ \hline \end{array}$
--	--	---	--	--	--	--	--	--	--

$\begin{array}{r} 0 \\ \times 6 \\ \hline 0 \end{array}$	$\begin{array}{r} 10 \\ \times 6 \\ \hline 60 \end{array}$	$\begin{array}{r} 20 \\ \times 6 \\ \hline \end{array}$	$\begin{array}{r} 30 \\ \times 6 \\ \hline \end{array}$	$\begin{array}{r} 40 \\ \times 6 \\ \hline \end{array}$	$\begin{array}{r} 50 \\ \times 6 \\ \hline \end{array}$	$\begin{array}{r} 60 \\ \times 6 \\ \hline \end{array}$	$\begin{array}{r} 70 \\ \times 6 \\ \hline \end{array}$	$\begin{array}{r} 80 \\ \times 6 \\ \hline \end{array}$	$\begin{array}{r} 90 \\ \times 6 \\ \hline \end{array}$
--	--	---	---	---	---	---	---	---	---

$30 + 2 = 32$

$\begin{array}{r} 30 \\ \times 6 \\ \hline 180 \end{array}$	$\begin{array}{r} 2 \\ \times 6 \\ \hline 12 \end{array}$	$\begin{array}{r} 32 \\ \times 6 \\ \hline 192 \end{array}$
---	---	---

$180 + 12 = 192$

$\begin{array}{r} 40 \\ \times 6 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ \times 6 \\ \hline \end{array}$	$\begin{array}{r} \phantom{00} \\ \times 6 \\ \hline \end{array}$
---	--	---

A.

$\begin{array}{r} 10 \\ \times 6 \\ \hline \end{array}$	$\begin{array}{r} 9 \\ \times 6 \\ \hline \end{array}$	$\begin{array}{r} \phantom{00} \\ \times 6 \\ \hline \end{array}$
---	--	---

B.

$\begin{array}{r} 90 \\ \times 6 \\ \hline \end{array}$	$\begin{array}{r} 6 \\ \times 6 \\ \hline \end{array}$	$\begin{array}{r} \phantom{00} \\ \times 6 \\ \hline \end{array}$
---	--	---

C.

$\begin{array}{r} 80 \\ \times 6 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ \times 6 \\ \hline \end{array}$	$\begin{array}{r} \phantom{00} \\ \times 6 \\ \hline \end{array}$
---	--	---

$\begin{array}{r} 70 \\ \times 6 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ \times 6 \\ \hline \end{array}$	$\begin{array}{r} \phantom{00} \\ \times 6 \\ \hline \end{array}$
---	--	---

$\begin{array}{r} 60 \\ \times 6 \\ \hline \end{array}$	$\begin{array}{r} \phantom{00} \\ \times 6 \\ \hline \end{array}$	$\begin{array}{r} 64 \\ \times 6 \\ \hline \end{array}$
---	---	---

C.

$\begin{array}{r} \phantom{00} \\ \times 6 \\ \hline \end{array}$	$\begin{array}{r} \phantom{00} \\ \times 6 \\ \hline \end{array}$	$\begin{array}{r} 29 \\ \times 6 \\ \hline \end{array}$
---	---	---

B.

$\begin{array}{r} \phantom{00} \\ \times 6 \\ \hline \end{array}$	$\begin{array}{r} \phantom{00} \\ \times 6 \\ \hline \end{array}$	$\begin{array}{r} 57 \\ \times 6 \\ \hline \end{array}$
---	---	---

A.

Please complete the following as True Statements . . . using single digit numbers only.

$40 = \underline{6 \times 6} + \underline{\frac{4}{D}}$

$50 = \underline{8 \times \phantom{00}} + \underline{\phantom{00} H}$

$25 = \underline{4 \times 7} \overset{\text{note}}{\downarrow} \underline{\phantom{00} 3}$

$50 = \underline{9 \times \phantom{00}} + \underline{\phantom{00} E}$

$40 = \underline{5 \times \phantom{00}} + \underline{\phantom{00} I}$

$60 = \underline{7 \times \phantom{00}} - \underline{\phantom{00} F}$

$25 = \underline{3 \times \phantom{00}} + \underline{\phantom{00}}$

$75 = \underline{9 \times \phantom{00}} + \underline{\phantom{00} D}$

$49 = \underline{6 \times \phantom{00}} - \underline{\phantom{00} G}$

$60 = \underline{8 \times \phantom{00}} + \underline{\phantom{00} F}$

$33 = \underline{5 \times \phantom{00}} + \underline{\phantom{00}}$

$53 = \underline{7 \times \phantom{00}} - \underline{\phantom{00} H}$

$30 = \underline{4 \times \phantom{00}} + \underline{\phantom{00}}$

$31 = \underline{3 \times \phantom{00}} + \underline{\phantom{00}}$

$17 = \underline{2 \times \phantom{00}} - \underline{\phantom{00}}$

$70 = \underline{8 \times \phantom{00}} + \underline{\phantom{00} G}$

$87 = \underline{9 \times \phantom{00}} + \underline{\phantom{00} E}$

$45 = \underline{7 \times \phantom{00}} - \underline{\phantom{00} I}$

A.	B.	C.
342	114	384
288	174	576

G.	D.	H.	E.	I.	F.
9,5	8,3	6,2	5,5	7,4	7,4
8,6	6,4	8,3	9,6	7,5	9,3

BUILDING and USING TABLES

$\begin{array}{r} 0 \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 1 \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 2 \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 6 \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 9 \\ \times 9 \\ \hline \end{array}$
--	--	--	--	--	--	--	--	--	--

$\begin{array}{r} 0 \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 10 \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 20 \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 30 \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 40 \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 50 \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 60 \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 70 \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 80 \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 90 \\ \times 9 \\ \hline \end{array}$
--	---	---	---	---	---	---	---	---	---

$\begin{array}{r} \phantom{0} \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} \phantom{0} \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 32 \\ \times 9 \\ \hline \end{array}$
--	--	---

A.

$\begin{array}{r} \phantom{0} \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} \phantom{0} \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 18 \\ \times 9 \\ \hline \end{array}$
--	--	---

B.

$\begin{array}{r} \phantom{0} \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} \phantom{0} \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 25 \\ \times 9 \\ \hline \end{array}$
--	--	---

$\begin{array}{r} \phantom{0} \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} \phantom{0} \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 89 \\ \times 9 \\ \hline \end{array}$
--	--	---

C.

$\begin{array}{r} \phantom{0} \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} \phantom{0} \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 54 \\ \times 9 \\ \hline \end{array}$
--	--	---

D.

$\begin{array}{r} \phantom{0} \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} \phantom{0} \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 73 \\ \times 9 \\ \hline \end{array}$
--	--	---

E.

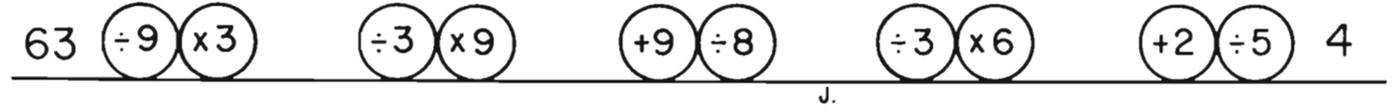
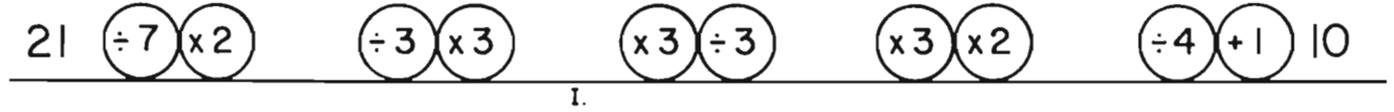
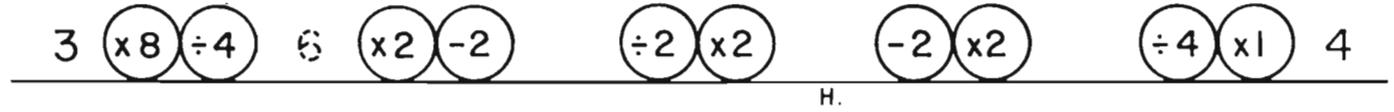
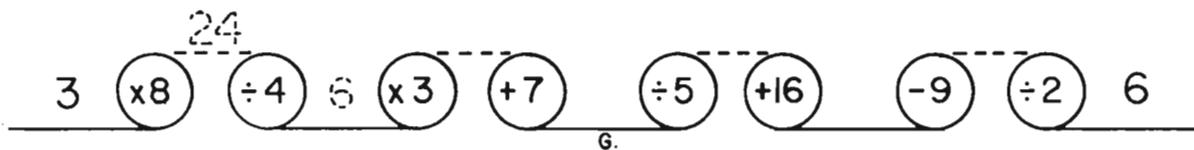
$\begin{array}{r} \phantom{0} \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} \phantom{0} \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 46 \\ \times 9 \\ \hline \end{array}$
--	--	---

$\begin{array}{r} \phantom{0} \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} \phantom{0} \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 91 \\ \times 9 \\ \hline \end{array}$
--	--	---

$\begin{array}{r} \phantom{0} \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} \phantom{0} \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 67 \\ \times 9 \\ \hline \end{array}$
--	--	---

F.

CHAIN REACTIONS



I.	A.	D.	F.	B.	E.	G.	C.	H.	J.
6	288	486	603	162	657	25	801	10	9

BUILDING and USING TABLES

$\begin{array}{r} 0 \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} 1 \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} 2 \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} 6 \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} 9 \\ \times 7 \\ \hline \end{array}$
--	--	--	--	--	--	--	--	--	--

$\begin{array}{r} 0 \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} 10 \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} 20 \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} 30 \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} 40 \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} 50 \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} 60 \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} 70 \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} 80 \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} 90 \\ \times 7 \\ \hline \end{array}$
--	---	---	---	---	---	---	---	---	---

$\begin{array}{r} \phantom{0} \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} \phantom{0} \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} 36 \\ \times 7 \\ \hline \end{array}$
--	--	---

A.

$\begin{array}{r} \phantom{0} \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} \phantom{0} \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} 74 \\ \times 7 \\ \hline \end{array}$
--	--	---

B.

$\begin{array}{r} \phantom{0} \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} \phantom{0} \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} 65 \\ \times 7 \\ \hline \end{array}$
--	--	---

$\begin{array}{r} \phantom{0} \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} \phantom{0} \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} 48 \\ \times 7 \\ \hline \end{array}$
--	--	---

C.

$\begin{array}{r} \phantom{0} \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} \phantom{0} \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} 59 \\ \times 7 \\ \hline \end{array}$
--	--	---

$\begin{array}{r} \phantom{0} \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} \phantom{0} \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} 87 \\ \times 7 \\ \hline \end{array}$
--	--	---

A.

$\begin{array}{r} \phantom{0} \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} \phantom{0} \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} 97 \\ \times 7 \\ \hline \end{array}$
--	--	---

B.

$\begin{array}{r} \phantom{0} \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} \phantom{0} \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} 68 \\ \times 7 \\ \hline \end{array}$
--	--	---

$\begin{array}{r} \phantom{0} \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} \phantom{0} \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} 95 \\ \times 7 \\ \hline \end{array}$
--	--	---

C.

Please complete the following as True Statements . . . using single digit numbers only.

$$35 = \underline{4 \times \phantom{00}} + \underline{\phantom{00}} \quad \text{D.}$$

$$40 = \underline{6 \times \phantom{00}} + \underline{\phantom{00}}$$

$$70 = \underline{8 \times \phantom{00}} \overset{\text{note}}{\downarrow} \underline{\phantom{00}}$$

$$37 = \underline{5 \times \phantom{00}} + \underline{\phantom{00}} \quad \text{E.}$$

$$75 = \underline{9 \times \phantom{00}} + \underline{\phantom{00}} \quad \text{I.}$$

$$53 = \underline{7 \times \phantom{00}} - \underline{\phantom{00}} \quad \text{F.}$$

$$52 = \underline{8 \times \phantom{00}} + \underline{\phantom{00}} \quad \text{F.}$$

$$39 = \underline{5 \times \phantom{00}} + \underline{\phantom{00}}$$

$$33 = \underline{4 \times \phantom{00}} - \underline{\phantom{00}}$$

$$59 = \underline{6 \times \phantom{00}} + \underline{\phantom{00}} \quad \text{G.}$$

$$70 = \underline{8 \times \phantom{00}} + \underline{\phantom{00}} \quad \text{D.}$$

$$51 = \underline{8 \times \phantom{00}} - \underline{\phantom{00}} \quad \text{G.}$$

$$44 = \underline{8 \times \phantom{00}} + \underline{\phantom{00}}$$

$$47 = \underline{5 \times \phantom{00}} + \underline{\phantom{00}}$$

$$75 = \underline{9 \times \phantom{00}} - \underline{\phantom{00}} \quad \text{H.}$$

$$66 = \underline{9 \times \phantom{00}} + \underline{\phantom{00}} \quad \text{H.}$$

$$53 = \underline{6 \times \phantom{00}} + \underline{\phantom{00}} \quad \text{E.}$$

$$50 = \underline{7 \times \phantom{00}} - \underline{\phantom{00}} \quad \text{I.}$$

A.	B.	C.
252	679	665
609	518	336

G.	D.	H.	E.	I.	F.
7,5	8,3	7,3	7,2	8,6	8,3
9,5	8,6	9,6	8,5	8,3	6,4

BUILDING and USING TABLES

$\begin{array}{r} 14 \\ \times 0 \\ \hline 0 \end{array}$	$\begin{array}{r} 14 \\ \times 1 \\ \hline 14 \end{array}$	$\begin{array}{r} 14 \\ \times 2 \\ \hline 28 \end{array}$	$\begin{array}{r} 14 \\ \times 3 \\ \hline \end{array}$	$\begin{array}{r} 14 \\ \times 4 \\ \hline \end{array}$	$\begin{array}{r} 14 \\ \times 5 \\ \hline \end{array}$	$\begin{array}{r} 14 \\ \times 6 \\ \hline \end{array}$	$\begin{array}{r} 14 \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} 14 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 14 \\ \times 9 \\ \hline \end{array}$
---	--	--	---	---	---	---	---	---	---

$\begin{array}{r} 14 \\ \times 0 \\ \hline 0 \end{array}$	$\begin{array}{r} 14 \\ \times 10 \\ \hline 140 \end{array}$	$\begin{array}{r} 14 \\ \times 20 \\ \hline \end{array}$	$\begin{array}{r} 14 \\ \times 30 \\ \hline \end{array}$	$\begin{array}{r} 14 \\ \times 40 \\ \hline \end{array}$	$\begin{array}{r} 14 \\ \times 50 \\ \hline \end{array}$	$\begin{array}{r} 14 \\ \times 60 \\ \hline \end{array}$	$\begin{array}{r} 14 \\ \times 70 \\ \hline \end{array}$	$\begin{array}{r} 14 \\ \times 80 \\ \hline \end{array}$	$\begin{array}{r} 14 \\ \times 90 \\ \hline \end{array}$
---	--	--	--	--	--	--	--	--	--

$\begin{array}{r} 14 \\ \times 28 \\ \hline 112 \\ 280 \\ \hline \end{array}$ A.	$\begin{array}{r} 14 \\ \times 57 \\ \hline \end{array}$ B.	$\begin{array}{r} 14 \\ \times 43 \\ \hline \end{array}$ C.	$\begin{array}{r} 14 \\ \times 58 \\ \hline \end{array}$ D.	$\begin{array}{r} 14 \\ \times 74 \\ \hline \end{array}$ D.
$\begin{array}{r} 14 \\ \times 63 \\ \hline \end{array}$ E.	$\begin{array}{r} 14 \\ \times 59 \\ \hline \end{array}$	$\begin{array}{r} 14 \\ \times 86 \\ \hline \end{array}$ F.	$\begin{array}{r} 14 \\ \times 91 \\ \hline \end{array}$	$\begin{array}{r} 14 \\ \times 67 \\ \hline \end{array}$ G.

CHAIN REACTIONS

$5 \begin{array}{c} \circledast 2 \\ \circledast 3 \\ \div 2 \\ \div 3 \end{array} \begin{array}{c} 10 \\ \hline \end{array} \begin{array}{c} \circledast 3 \\ \circledast 2 \\ \div 3 \\ \div 2 \end{array} 5$	H.	I.
$17 \begin{array}{c} \ominus 5 \\ \ominus 5 \end{array} \begin{array}{c} \circledast 3 \\ \circledast 2 \end{array} \begin{array}{c} \oplus 4 \\ \oplus 4 \end{array} \begin{array}{c} \div 2 \\ \div 5 \end{array} \begin{array}{c} \circledast 4 \\ \circledast 2 \end{array} 40$	J.	
$4 \begin{array}{c} \circledast 3 \\ \circledast 3 \end{array} \begin{array}{c} \div 3 \\ \div 2 \end{array} \begin{array}{c} \circledast 2 \\ \circledast 5 \end{array} \begin{array}{c} \ominus 25 \\ \ominus 25 \end{array} \begin{array}{c} \ominus 8 \\ \ominus 2 \end{array} 0$	K.	L.
$20 \begin{array}{c} \oplus 9 \\ \oplus 9 \end{array} \begin{array}{c} \ominus 7 \\ \ominus 3 \end{array} \begin{array}{c} \div 2 \\ \div 2 \end{array} \begin{array}{c} \oplus 15 \\ \oplus 15 \end{array} \begin{array}{c} \ominus 8 \\ \ominus 8 \end{array} 21$		M.

A.	F.	B.	J.	G.	C.	K.	H.	L.	D.	M.	I.	E.
392	1204	798	42	938	602	36	30	60	1036	37	5	882



BUILDING and USING TABLES

$\begin{array}{r} 83 \\ \times 0 \end{array}$	$\begin{array}{r} 83 \\ \times 1 \end{array}$	$\begin{array}{r} 83 \\ \times 2 \end{array}$	$\begin{array}{r} 83 \\ \times 3 \end{array}$	$\begin{array}{r} 83 \\ \times 4 \end{array}$	$\begin{array}{r} 83 \\ \times 5 \end{array}$	$\begin{array}{r} 83 \\ \times 6 \end{array}$	$\begin{array}{r} 83 \\ \times 7 \end{array}$	$\begin{array}{r} 83 \\ \times 8 \end{array}$	$\begin{array}{r} 83 \\ \times 9 \end{array}$
---	---	---	---	---	---	---	---	---	---

$\begin{array}{r} 83 \\ \times 0 \end{array}$	$\begin{array}{r} 83 \\ \times 10 \end{array}$	$\begin{array}{r} 83 \\ \times 20 \end{array}$	$\begin{array}{r} 83 \\ \times 30 \end{array}$	$\begin{array}{r} 83 \\ \times 40 \end{array}$	$\begin{array}{r} 83 \\ \times 50 \end{array}$	$\begin{array}{r} 83 \\ \times 60 \end{array}$	$\begin{array}{r} 83 \\ \times 70 \end{array}$	$\begin{array}{r} 83 \\ \times 80 \end{array}$	$\begin{array}{r} 83 \\ \times 90 \end{array}$
---	--	--	--	--	--	--	--	--	--

$\begin{array}{r} 83 \\ \times 13 \\ \hline \text{-----} \\ \hline \end{array}$ A.	$\begin{array}{r} 83 \\ \times 31 \\ \hline \text{-----} \\ \hline \end{array}$ B.	$\begin{array}{r} 83 \\ \times 76 \\ \hline \text{-----} \\ \hline \end{array}$ C.	$\begin{array}{r} 83 \\ \times 67 \\ \hline \text{-----} \\ \hline \end{array}$ D.	$\begin{array}{r} 83 \\ \times 55 \\ \hline \text{-----} \\ \hline \end{array}$
$\begin{array}{r} 83 \\ \times 28 \\ \hline \text{-----} \\ \hline \end{array}$ E.	$\begin{array}{r} 83 \\ \times 82 \\ \hline \text{-----} \\ \hline \end{array}$	$\begin{array}{r} 83 \\ \times 49 \\ \hline \text{-----} \\ \hline \end{array}$ F.	$\begin{array}{r} 83 \\ \times 94 \\ \hline \text{-----} \\ \hline \end{array}$	$\begin{array}{r} 83 \\ \times 65 \\ \hline \text{-----} \\ \hline \end{array}$ G.

CHAIN REACTIONS

8  $\overset{17}{\text{---}}$   $\textcircled{+9}$   $\textcircled{-7}$  10  $\textcircled{+12}$   $\textcircled{+13}$   $\textcircled{\div 5}$   $\textcircled{\div 7}$   $\textcircled{\times 7}$   $\textcircled{\times 9}$  63  
H.

43  $\textcircled{-8}$   $\textcircled{-2}$   $\textcircled{-4}$   $\textcircled{-6}$   $\textcircled{-9}$   $\textcircled{-1}$   $\textcircled{-7}$   $\textcircled{-6}$   $\textcircled{+7}$   $\textcircled{\times 8}$  56  
I.

12  $\textcircled{\times 3}$   $\textcircled{\div 4}$   $\textcircled{\times 4}$   $\textcircled{\div 3}$   $\textcircled{\times 5}$   $\textcircled{\div 6}$   $\textcircled{\times 6}$   $\textcircled{\div 5}$   $\textcircled{\times 10}$   $\textcircled{\div 3}$  40  
J. K.

12  $\textcircled{\div 4}$   $\textcircled{\times 3}$   $\textcircled{\div 3}$   $\textcircled{\times 4}$   $\textcircled{\div 6}$   $\textcircled{\times 5}$   $\textcircled{\div 5}$   $\textcircled{\times 6}$   $\textcircled{\div 3}$   $\textcircled{\times 3}$  12  
L. M.

1  $\textcircled{\times 2}$   $\textcircled{\times 5}$   $\textcircled{\times 2}$   $\textcircled{\times 5}$   $\textcircled{\times 2}$   $\textcircled{\times 5}$  1,000

A.	F.	J.	B.	G.	K.	C.	H.	L.	D.	I.	M.	E.
1079	4067	12	2573	5395	12	6308	35	12	5561	33	12	2324

BUILDING and USING TABLES

$\begin{array}{r} 23 \\ \times 0 \\ \hline \end{array}$	$\begin{array}{r} 23 \\ \times 1 \\ \hline \end{array}$	$\begin{array}{r} 23 \\ \times 2 \\ \hline \end{array}$	$\begin{array}{r} 23 \\ \times 3 \\ \hline \end{array}$	$\begin{array}{r} 23 \\ \times 4 \\ \hline \end{array}$	$\begin{array}{r} 23 \\ \times 5 \\ \hline \end{array}$	$\begin{array}{r} 23 \\ \times 6 \\ \hline \end{array}$	$\begin{array}{r} 23 \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} 23 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 23 \\ \times 9 \\ \hline \end{array}$
---	---	---	---	---	---	---	---	---	---

$\begin{array}{r} 23 \\ \times 0 \\ \hline \end{array}$	$\begin{array}{r} 23 \\ \times 10 \\ \hline \end{array}$	$\begin{array}{r} 23 \\ \times 20 \\ \hline \end{array}$	$\begin{array}{r} 23 \\ \times 30 \\ \hline \end{array}$	$\begin{array}{r} 23 \\ \times 40 \\ \hline \end{array}$	$\begin{array}{r} 23 \\ \times 50 \\ \hline \end{array}$	$\begin{array}{r} 23 \\ \times 60 \\ \hline \end{array}$	$\begin{array}{r} 23 \\ \times 70 \\ \hline \end{array}$	$\begin{array}{r} 23 \\ \times 80 \\ \hline \end{array}$	$\begin{array}{r} 23 \\ \times 90 \\ \hline \end{array}$
---	--	--	--	--	--	--	--	--	--

$\begin{array}{r} \phantom{23} \\ \times 43 \\ \hline \end{array}$	$\begin{array}{r} \phantom{23} \\ \times 28 \\ \hline \end{array}$	$\begin{array}{r} \phantom{23} \\ \times 58 \\ \hline \end{array}$	$\begin{array}{r} \phantom{23} \\ \times 86 \\ \hline \end{array}$	$\begin{array}{r} \phantom{23} \\ \times 74 \\ \hline \end{array}$
$\begin{array}{r} \phantom{23} \\ \times 91 \\ \hline \end{array}$	$\begin{array}{r} \phantom{23} \\ \times 67 \\ \hline \end{array}$	$\begin{array}{r} \phantom{23} \\ \times 99 \\ \hline \end{array}$	$\begin{array}{r} \phantom{23} \\ \times 65 \\ \hline \end{array}$	$\begin{array}{r} \phantom{23} \\ \times 59 \\ \hline \end{array}$

Please complete the following as True Statements . . .  
using single digit numbers only.

$35 = \underline{4 \times \phantom{00}} + \underline{\phantom{00}}$	$78 = \underline{8 \times \phantom{00}} + \underline{\phantom{00}}$	$67 = \underline{9 \times \phantom{00}} + \underline{\phantom{00}}$
$35 = \underline{6 \times \phantom{00}} + \underline{\phantom{00}}$	$31 = \underline{7 \times \phantom{00}} + \underline{\phantom{00}}$	$39 = \underline{4 \times \phantom{00}} + \underline{\phantom{00}}$
$51 = \underline{7 \times \phantom{00}} + \underline{\phantom{00}}$	$84 = \underline{9 \times \phantom{00}} + \underline{\phantom{00}}$	$75 = \underline{9 \times \phantom{00}} + \underline{\phantom{00}}$
$57 = \underline{9 \times \phantom{00}} + \underline{\phantom{00}}$	$38 = \underline{5 \times \phantom{00}} + \underline{\phantom{00}}$	$43 = \underline{5 \times \phantom{00}} + \underline{\phantom{00}}$
$27 = \underline{4 \times \phantom{00}} + \underline{\phantom{00}}$	$40 = \underline{6 \times \phantom{00}} + \underline{\phantom{00}}$	$60 = \underline{8 \times \phantom{00}} + \underline{\phantom{00}}$
$67 = \underline{8 \times \phantom{00}} + \underline{\phantom{00}}$	$48 = \underline{5 \times \phantom{00}} + \underline{\phantom{00}}$	$59 = \underline{6 \times \phantom{00}} + \underline{\phantom{00}}$

“Check List Addition”

Please use the smallest whole numbers possible in the boxes.

32 16 8 4 2 1  
      7  
 A.  $(1 \times 4) + (1 \times 2) + (1 \times 1) = 7$

27 9 3 1  
    8  
 E.  $(2 \times 3) + (2 \times 1) = 8$

125 25 5 1  
    20

32 16 8 4 2 1  
      14  
 B.

27 9 3 1  
    16

125 25 5 1  
    40  
 F.

32 16 8 4 2 1  
      21  
 C.

27 9 3 1  
    24  
 G.

125 25 5 1  
    60  
 H.

32 16 8 4 2 1  
      28  
 D.

27 9 3 1  
    32

125 25 5 1  
    80  
 I.

32 16 8 4 2 1  
      35  
 A.

27 9 3 1  
    40  
 J.

125 25 5 1  
    100

32 16 8 4 2 1  
      42  
 B.

27 9 3 1  
    48  
 E.

125 25 5 1  
    120

32 16 8 4 2 1  
      49

27 9 3 1  
    56  
 F.

125 25 5 1  
    140

32 16 8 4 2 1  
      56  
 C.

27 9 3 1  
    64  
 G.

125 25 5 1  
    160  
 H.

32 16 8 4 2 1  
      63  
 D.

27 9 3 1  
    72  
 I.

125 25 5 1  
    180  
 J.

A.	E.	I.	B.	F.	J.	C.	G.	H.	D.
0,0,0,1,1,1	0,0,2,2	2,2,0,0	1,0,1,0,1,0	2,0,0,2	1,1,1,1	1,1,1,0,0,0	2,1,0,1	0,2,2,0	0,1,1,1,0,0
1,0,0,0,1,1	1,2,1,0	0,3,1,0	0,0,1,1,1,0	0,1,3,0	1,2,1,0	0,1,0,1,0,1	0,2,2,0	1,1,2,0	1,1,1,1,1,1

"Check List Addition"

Please use the smallest whole numbers possible in the boxes.

$$\begin{array}{|c|c|c|} \hline 16 & 4 & 1 \\ \hline 0 & 3 & 2 \\ \hline \end{array} \quad 14$$

$(3 \times 4) + (2 \times 1) = 14$

$$\begin{array}{|c|c|c|} \hline 16 & 4 & 1 \\ \hline \square & \square & \square \\ \hline \end{array} \quad 21$$

A.

$$\begin{array}{|c|c|c|} \hline 36 & 6 & 1 \\ \hline \square & \square & \square \\ \hline \end{array} \quad 22$$

E.

$$\begin{array}{|c|c|c|} \hline 36 & 6 & 1 \\ \hline \square & \square & \square \\ \hline \end{array} \quad 33$$

F.

$$\begin{array}{|c|c|c|} \hline 16 & 4 & 1 \\ \hline \square & \square & \square \\ \hline \end{array} \quad 24$$

B.

$$\begin{array}{|c|c|c|} \hline 16 & 4 & 1 \\ \hline \square & \square & \square \\ \hline \end{array} \quad 30$$

C.

$$\begin{array}{|c|c|c|} \hline 36 & 6 & 1 \\ \hline \square & \square & \square \\ \hline \end{array} \quad 42$$

G.

$$\begin{array}{|c|c|c|} \hline 36 & 6 & 1 \\ \hline \square & \square & \square \\ \hline \end{array} \quad 48$$

H.

$$\begin{array}{|c|c|c|} \hline 16 & 4 & 1 \\ \hline \square & \square & \square \\ \hline \end{array} \quad 36$$

$$\begin{array}{|c|c|c|} \hline 16 & 4 & 1 \\ \hline \square & \square & \square \\ \hline \end{array} \quad 50$$

D.

$$\begin{array}{|c|c|c|} \hline 36 & 6 & 1 \\ \hline \square & \square & \square \\ \hline \end{array} \quad 73$$

$$\begin{array}{|c|c|c|} \hline 36 & 6 & 1 \\ \hline \square & \square & \square \\ \hline \end{array} \quad 80$$

$$\begin{array}{|c|c|c|} \hline 49 & 7 & 1 \\ \hline \square & \square & \square \\ \hline \end{array} \quad 20$$

I.

$$\begin{array}{|c|c|c|} \hline 49 & 7 & 1 \\ \hline \square & \square & \square \\ \hline \end{array} \quad 31$$

J.

$$\begin{array}{|c|c|c|} \hline 64 & 8 & 1 \\ \hline \square & \square & \square \\ \hline \end{array} \quad 15$$

C.

$$\begin{array}{|c|c|c|} \hline 64 & 8 & 1 \\ \hline \square & \square & \square \\ \hline \end{array} \quad 35$$

D.

$$\begin{array}{|c|c|c|} \hline 49 & 7 & 1 \\ \hline \square & \square & \square \\ \hline \end{array} \quad 25$$

$$\begin{array}{|c|c|c|} \hline 49 & 7 & 1 \\ \hline \square & \square & \square \\ \hline \end{array} \quad 40$$

$$\begin{array}{|c|c|c|} \hline 64 & 8 & 1 \\ \hline \square & \square & \square \\ \hline \end{array} \quad 60$$

$$\begin{array}{|c|c|c|} \hline 64 & 8 & 1 \\ \hline \square & \square & \square \\ \hline \end{array} \quad 47$$

E.

$$\begin{array}{|c|c|c|} \hline 49 & 7 & 1 \\ \hline \square & \square & \square \\ \hline \end{array} \quad 48$$

A.

$$\begin{array}{|c|c|c|} \hline 49 & 7 & 1 \\ \hline \square & \square & \square \\ \hline \end{array} \quad 63$$

B.

$$\begin{array}{|c|c|c|} \hline 64 & 8 & 1 \\ \hline \square & \square & \square \\ \hline \end{array} \quad 89$$

F.

$$\begin{array}{|c|c|c|} \hline 64 & 8 & 1 \\ \hline \square & \square & \square \\ \hline \end{array} \quad 130$$

G.

$$\begin{array}{|c|c|c|} \hline 81 & 9 & 1 \\ \hline \square & \square & \square \\ \hline \end{array} \quad 44$$

H.

$$\begin{array}{|c|c|c|} \hline 81 & 9 & 1 \\ \hline \square & \square & \square \\ \hline \end{array} \quad 60$$

I.

$$\begin{array}{|c|c|c|} \hline 100 & 10 & 1 \\ \hline \square & \square & \square \\ \hline \end{array} \quad 87$$

$$\begin{array}{|c|c|c|} \hline 100 & 10 & 1 \\ \hline \square & \square & \square \\ \hline \end{array} \quad 120$$

$$\begin{array}{|c|c|c|} \hline 81 & 9 & 1 \\ \hline \square & \square & \square \\ \hline \end{array} \quad 52$$

$$\begin{array}{|c|c|c|} \hline 81 & 9 & 1 \\ \hline \square & \square & \square \\ \hline \end{array} \quad 69$$

$$\begin{array}{|c|c|c|} \hline 100 & 10 & 1 \\ \hline \square & \square & \square \\ \hline \end{array} \quad 715$$

$$\begin{array}{|c|c|c|} \hline 100 & 10 & 1 \\ \hline \square & \square & \square \\ \hline \end{array} \quad 896$$

$$\begin{array}{|c|c|c|} \hline 81 & 9 & 1 \\ \hline \square & \square & \square \\ \hline \end{array} \quad 80$$

$$\begin{array}{|c|c|c|} \hline 81 & 9 & 1 \\ \hline \square & \square & \square \\ \hline \end{array} \quad 160$$

J.

$$\begin{array}{|c|c|c|} \hline 100 & 10 & 1 \\ \hline \square & \square & \square \\ \hline \end{array} \quad 640$$

$$\begin{array}{|c|c|c|} \hline 100 & 10 & 1 \\ \hline \square & \square & \square \\ \hline \end{array} \quad 999$$

A.	E.	H.	B.	F.	I.	C.	G.	J.	D.
0,6,6	0,3,4	1,2,0	1,2,0	1,3,1	0,2,6	1,3,2	2,0,2	1,8,7	3,0,2
1,1,1	0,5,7	0,4,8	1,2,0	0,5,3	0,6,6	0,1,7	1,1,0	0,4,3	0,4,3

“Check List Addition”

Please use the smallest whole numbers possible in the boxes.

128 64 32 16 8 4 2 1  
        35

A.

81 27 9 3 1  
     35

B.

64 16 4 1  
    35

C.

36 6 1  
   35

49 7 1  
   35

125 25 5 1  
    35

D.

64 8 1  
   35

81 9 1  
   35

E.

128 64 32 16 8 4 2 1  
        60

A.

81 27 9 3 1  
     60

B.

64 16 4 1  
    60

C.

36 6 1  
   60

D.

49 7 1  
   60

125 25 5 1  
    60

64 8 1  
   60

81 9 1  
   60

E.

128 64 32 16 8 4 2 1  
        80

A.

81 27 9 3 1  
     80

B.

64 16 4 1  
    80

36 6 1  
   80

49 7 1  
   80

C.

125 25 5 1  
    80

64 8 1  
   80

81 9 1  
   80

D.

E.

A.	B.	C.	D.	E.
0,1,0,1,0,0,0,0	0,2,0,2,0	0,2,0,3	1,4,0	0,3,8
0,0,1,0,0,0,1,1	0,2,2,2,2	1,4,3	0,1,2,0	0,8,8
0,0,1,1,1,1,0,0	0,1,0,2,2	0,3,3,0	1,2,0	0,6,6

# CHANGE and STAMP Problems

Rules: Show a combination of Coins or Stamps for the amounts shown . . . with exactly the number of Coins or Stamps indicated.

50¢ 25¢ 10¢ 5¢ 1¢

Number of COINS

A.						23¢ ( 7 )
B.						23¢ ( 10 )
C.						23¢ ( 15 )

11¢ 8¢ 4¢ 3¢ 1¢

Number of STAMPS

D.						16¢ ( 6 )
E.						16¢ ( 5 )
F.						16¢ ( 4 )

50¢ 25¢ 10¢ 5¢ 1¢

A.						35¢ ( 11 )
						35¢ ( 9 )
B.						35¢ ( 5 )

11¢ 8¢ 4¢ 3¢ 1¢

C.						25¢ ( 8 )
D.						25¢ ( 4 )
						25¢ ( 5 )

50¢ 25¢ 10¢ 5¢ 1¢

E.						41¢ ( 23 )
F.						41¢ ( 16 )
						41¢ ( 13 )

12¢ 9¢ 5¢ 3¢ 2¢

A.						31¢ ( 8 )
						31¢ ( 6 )
B.						31¢ ( 5 )

50¢ 25¢ 10¢ 5¢ 1¢

C.						57¢ ( 4 )
						57¢ ( 17 )
D.						57¢ ( 24 )

20¢ 11¢ 5¢ 4¢ 3¢

						45¢ ( 9 )
E.						45¢ ( 6 )
F.						45¢ ( 10 )

There may be other combinations than those shown below.

A.	B.	C.	D.	E.	F.
0,0,0,4,3	1,1,1,1,1	0,0,1,7,0	0,0,2,2,2	1,1,0,2,2	0,0,1,4,11
0,0,5,0,3	0,0,2,3,0	0,0,0,2,13	0,0,1,6,17	0,1,0,2,2	0,1,2,3,4
0,1,0,0,10	0,0,1,1,8	1,0,0,1,2	0,3,0,0,1	0,0,2,0,21	1,0,0,1,2

“Check List Addition”

Please use the smallest whole numbers possible in the boxes.

$$\begin{array}{cccccccc|c} 128 & 64 & 32 & 16 & 8 & 4 & 2 & 1 & 40 \\ \hline \square & \end{array}$$

$$\begin{array}{cccc|c} 81 & 27 & 9 & 3 & 1 & 40 \\ \hline \square & \square & \square & \square & \square & \end{array}$$

$$\begin{array}{cccc|c} 64 & 16 & 4 & 1 & 38 \\ \hline \square & \square & \square & \square & \end{array}$$

$$\begin{array}{ccc|c} 36 & 6 & 1 & 32 \\ \hline \square & \square & \square & \end{array}$$

$$\begin{array}{ccc|c} 49 & 7 & 1 & 37 \\ \hline \square & \square & \square & \end{array}$$

$$\begin{array}{cccc|c} 125 & 25 & 5 & 1 & 86 \\ \hline \square & \square & \square & \square & \end{array}$$

$$\begin{array}{ccc|c} 64 & 8 & 1 & 57 \\ \hline \square & \square & \square & \end{array}$$

$$\begin{array}{ccc|c} 81 & 9 & 1 & 69 \\ \hline \square & \square & \square & \end{array}$$

$$\begin{array}{cccccccc|c} 128 & 64 & 32 & 16 & 8 & 4 & 2 & 1 & 132 \\ \hline \square & \end{array}$$

$$\begin{array}{cccc|c} 81 & 27 & 9 & 3 & 1 & 98 \\ \hline \square & \square & \square & \square & \square & \end{array}$$

$$\begin{array}{cccc|c} 64 & 16 & 4 & 1 & 100 \\ \hline \square & \square & \square & \square & \end{array}$$

$$\begin{array}{ccc|c} 36 & 6 & 1 & 75 \\ \hline \square & \square & \square & \end{array}$$

$$\begin{array}{ccc|c} 49 & 7 & 1 & 89 \\ \hline \square & \square & \square & \end{array}$$

$$\begin{array}{cccc|c} 125 & 25 & 5 & 1 & 180 \\ \hline \square & \square & \square & \square & \end{array}$$

$$\begin{array}{ccc|c} 64 & 8 & 1 & 62 \\ \hline \square & \square & \square & \end{array}$$

$$\begin{array}{ccc|c} 81 & 9 & 1 & 75 \\ \hline \square & \square & \square & \end{array}$$

$$\begin{array}{cccccccc|c} 128 & 64 & 32 & 16 & 8 & 4 & 2 & 1 & 77 \\ \hline \square & \end{array}$$

$$\begin{array}{cccc|c} 81 & 27 & 9 & 3 & 1 & 63 \\ \hline \square & \square & \square & \square & \square & \end{array}$$

$$\begin{array}{cccc|c} 64 & 16 & 4 & 1 & 56 \\ \hline \square & \square & \square & \square & \end{array}$$

$$\begin{array}{ccc|c} 36 & 6 & 1 & 85 \\ \hline \square & \square & \square & \end{array}$$

$$\begin{array}{ccc|c} 49 & 7 & 1 & 99 \\ \hline \square & \square & \square & \end{array}$$

$$\begin{array}{cccc|c} 125 & 25 & 5 & 1 & 124 \\ \hline \square & \square & \square & \square & \end{array}$$

$$\begin{array}{ccc|c} 64 & 8 & 1 & 127 \\ \hline \square & \square & \square & \end{array}$$

$$\begin{array}{ccc|c} 81 & 9 & 1 & 160 \\ \hline \square & \square & \square & \end{array}$$



How do you feel ?

BUILDING and USING TABLES

$\begin{array}{r} 0 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 1 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 2 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 6 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 9 \\ \times 8 \\ \hline \end{array}$
--	--	--	--	--	--	--	--	--	--

$\begin{array}{r} 0 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 10 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 20 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 30 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 40 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 50 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 60 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 70 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 80 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 90 \\ \times 8 \\ \hline \end{array}$
--	---	---	---	---	---	---	---	---	---

Please use the "scribble space" . . . if you want to.

$\begin{array}{r} 21 \\ 8 \overline{) 168} \\ \underline{+ 160} \\ 168 \end{array}$	$\begin{array}{r} \text{A.} \\ 8 \overline{) 376} \\ \underline{+ 320} \\ 56 \end{array}$	$\begin{array}{r} \text{B.} \\ 8 \overline{) 104} \\ \underline{+ 96} \\ 8 \end{array}$
$\begin{array}{r} \text{C.} \\ 8 \overline{) 304} \\ \underline{+ 240} \\ 64 \end{array}$	$\begin{array}{r} \text{D.} \\ 8 \overline{) 752} \\ \underline{+ 640} \\ 112 \end{array}$	$\begin{array}{r} \text{E.} \\ 8 \overline{) 520} \\ \underline{+ 400} \\ 120 \end{array}$
$\begin{array}{r} \text{F.} \\ 8 \overline{) 688} \\ \underline{+ 560} \\ 128 \end{array}$	$\begin{array}{r} 8 \overline{) 472} \\ \underline{+ 360} \\ 112 \end{array}$	$\begin{array}{r} 8 \overline{) 576} \\ \underline{+ 448} \\ 128 \end{array}$

On your Own . . . all the way.

$\begin{array}{r} 10 \\ \times 8 \\ \hline 80 \end{array}$	$\begin{array}{r} 2 \\ \times 8 \\ \hline 16 \end{array}$	$\begin{array}{r} 12 \\ \times 8 \\ \hline 96 \end{array}$	$\begin{array}{r} \times 8 \\ \hline \end{array}$	$\begin{array}{r} \times 8 \\ \hline \end{array}$	$\begin{array}{r} 24 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} \times 8 \\ \hline \end{array}$	$\begin{array}{r} \times 8 \\ \hline \end{array}$	$\begin{array}{r} 48 \\ \times 8 \\ \hline \end{array}$
$\begin{array}{r} \times 8 \\ \hline \end{array}$	$\begin{array}{r} \times 8 \\ \hline \end{array}$	$\begin{array}{r} 23 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} \times 8 \\ \hline \end{array}$	$\begin{array}{r} \times 8 \\ \hline \end{array}$	$\begin{array}{r} 46 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} \times 8 \\ \hline \end{array}$	$\begin{array}{r} \times 8 \\ \hline \end{array}$	$\begin{array}{r} 92 \\ \times 8 \\ \hline \end{array}$

A.	B.	C.	D.	E.	F.
47	13	38	94	65	86

BUILDING and USING TABLES

$\begin{array}{r} 0 \\ \times 5 \\ \hline \end{array}$	$\begin{array}{r} 1 \\ \times 5 \\ \hline \end{array}$	$\begin{array}{r} 2 \\ \times 5 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ \times 5 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ \times 5 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ \times 5 \\ \hline \end{array}$	$\begin{array}{r} 6 \\ \times 5 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ \times 5 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ \times 5 \\ \hline \end{array}$	$\begin{array}{r} 9 \\ \times 5 \\ \hline \end{array}$
$\begin{array}{r} 0 \\ \times 5 \\ \hline \end{array}$	$\begin{array}{r} 10 \\ \times 5 \\ \hline \end{array}$	$\begin{array}{r} 20 \\ \times 5 \\ \hline \end{array}$	$\begin{array}{r} 30 \\ \times 5 \\ \hline \end{array}$	$\begin{array}{r} 40 \\ \times 5 \\ \hline \end{array}$	$\begin{array}{r} 50 \\ \times 5 \\ \hline \end{array}$	$\begin{array}{r} 60 \\ \times 5 \\ \hline \end{array}$	$\begin{array}{r} 70 \\ \times 5 \\ \hline \end{array}$	$\begin{array}{r} 80 \\ \times 5 \\ \hline \end{array}$	$\begin{array}{r} 90 \\ \times 5 \\ \hline \end{array}$

Please use the "scribble space" . . . if you want to.

$5 \overline{) 105}$ A.	$5 \overline{) 210}$ B.	$5 \overline{) 345}$ C.
$5 \overline{) 125}$ D.	$5 \overline{) 240}$ E.	$5 \overline{) 285}$ F.
$5 \overline{) 475}$ G.	$5 \overline{) 385}$ H.	$5 \overline{) 310}$ I.

CHAIN REACTIONS

7	(+8)	(+8)	(+8)	(+8)	(+8)	(+8)	(+8)	(+8)	71
8	(+7)	(+7)	(+7)	(+7)	(+7)	(+7)	(+7)	(+7)	64
10	(+9)	(+9)	(+9)	(+9)	(+9)	(+9)	(+9)	(+9)	82
5	(+6)	(+6)	(+6)	(+6)	(+6)	(+6)	(+6)	(+6)	53

A.	B.	C.	D.	E.	F.	G.	H.	I.	J.	K.	L.	M.
19	40	69	12	48	57	83	77	88	40	36	45	30
21	42	61	25	50	46	95	99	62	39	35	46	29

BUILDING and USING TABLES

$\begin{array}{r} 0 \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 1 \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 2 \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 6 \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 9 \\ \times 9 \\ \hline \end{array}$
--	--	--	--	--	--	--	--	--	--

$\begin{array}{r} 0 \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 10 \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 20 \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 30 \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 40 \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 50 \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 60 \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 70 \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 80 \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 90 \\ \times 9 \\ \hline \end{array}$
--	---	---	---	---	---	---	---	---	---

Please use the "scribble space" . . . if you want to.

A. $9 \overline{) 108}$	B. $9 \overline{) 279}$	C. $9 \overline{) 126}$
D. $9 \overline{) 819}$	E. $9 \overline{) 675}$	F. $9 \overline{) 243}$
G. $9 \overline{) 504}$	H. $9 \overline{) 612}$	I. $9 \overline{) 774}$

CHAIN REACTIONS

7	(+6)	(+6)	(+6)	(+6)	(+6)	(+6)	(+6)	(+6)	55
8	(+9)	(+9)	(+9)	(+9)	(+9)	(+9)	(+9)	(+9)	80
6	(+7)	(+7)	(+7)	(+7)	(+7)	(+7)	(+7)	(+7)	62
9	(+8)	(+8)	(+8)	(+8)	(+8)	(+8)	(+8)	(+8)	73

A.	B.	C.	D.	E.	F.	G.	H.	I.	J.	K.	L.	M.
13	32	14	89	75	27	56	65	85	31	45	35	40
12	31	12	91	68	30	55	68	86	30	44	34	41

"Check List Addition"

Please use the smallest whole numbers possible in the boxes.

128 64 32 16 8 4 2 1  
        50

A.

81 27 9 3 1  
     50

B.

64 16 4 1  
    50

C.

36 6 1  
   50

D.

49 7 1  
   50

125 25 5 1  
    50

64 8 1  
   50

E.

81 9 1  
   50

128 64 32 16 8 4 2 1  
        75

A.

81 27 9 3 1  
     75

B.

64 16 4 1  
    75

C.

36 6 1  
   75

D.

49 7 1  
   75

D.

125 25 5 1  
    75

64 8 1  
   75

E.

81 9 1  
   75

128 64 32 16 8 4 2 1  
        100

A.

81 27 9 3 1  
     100

B.

64 16 4 1  
    100

C.

36 6 1  
   100

D.

49 7 1  
   100

D.

125 25 5 1  
    100

C.

64 8 1  
   100

C.

81 9 1  
   100

E.

A.	B.	C.	D.	E.
0,1,1,0,0,1,0,0	0,2,2,1,0	0,3,0,2	1,2,2	0,8,3
0,1,0,0,1,0,1,1	0,1,2,1,2	1,4,4	1,3,5	0,6,2
0,0,1,1,0,0,1,0	1,0,2,0,1	1,0,2,3	2,4,4	1,2,1

BUILDING and USING TABLES

$\begin{array}{r} 47 \\ \times 0 \\ \hline 0 \end{array}$	$\begin{array}{r} 47 \\ \times 1 \\ \hline 47 \end{array}$	$\begin{array}{r} 47 \\ \times 2 \\ \hline \end{array}$	$\begin{array}{r} 47 \\ \times 3 \\ \hline \end{array}$	$\begin{array}{r} 47 \\ \times 4 \\ \hline \end{array}$	$\begin{array}{r} 47 \\ \times 5 \\ \hline \end{array}$	$\begin{array}{r} 47 \\ \times 6 \\ \hline \end{array}$	$\begin{array}{r} 47 \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} 47 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 47 \\ \times 9 \\ \hline \end{array}$
---	--	---	---	---	---	---	---	---	---

$\begin{array}{r} 47 \\ \times 0 \\ \hline 0 \end{array}$	$\begin{array}{r} 47 \\ \times 10 \\ \hline 47 \cdot \end{array}$	$\begin{array}{r} 47 \\ \times 20 \\ \hline 94 \cdot \end{array}$	$\begin{array}{r} 47 \\ \times 30 \\ \hline \cdot \end{array}$	$\begin{array}{r} 47 \\ \times 40 \\ \hline \cdot \end{array}$	$\begin{array}{r} 47 \\ \times 50 \\ \hline \cdot \end{array}$	$\begin{array}{r} 47 \\ \times 60 \\ \hline \cdot \end{array}$	$\begin{array}{r} 47 \\ \times 70 \\ \hline \cdot \end{array}$	$\begin{array}{r} 47 \\ \times 80 \\ \hline \cdot \end{array}$	$\begin{array}{r} 47 \\ \times 90 \\ \hline \cdot \end{array}$
---	---	---	--	--	--	--	--	--	--

Since "0" will be written where you find a ".", you can leave a space.

$\begin{array}{r} 47 \\ \times \quad A. \\ \hline 376 \\ \hline 94 \cdot \\ \hline 1316 \end{array}$	$\begin{array}{r} 47 \\ \times \quad B. \\ \hline \hline \hline \cdot \\ \hline 3572 \end{array}$	$\begin{array}{r} 47 \\ \times \quad C. \\ \hline \hline \hline \cdot \\ \hline 1833 \end{array}$	$\begin{array}{r} 47 \\ \times \quad D. \\ \hline \hline \hline \cdot \\ \hline 4324 \end{array}$	$\begin{array}{r} 47 \\ \times \quad \hline \hline \hline \cdot \\ \hline 2209 \end{array}$
$\begin{array}{r} 47 \\ \times \quad E. \\ \hline \hline \hline \cdot \\ \hline 4465 \end{array}$	$\begin{array}{r} 47 \\ \times \quad \hline \hline \hline \cdot \\ \hline 2632 \end{array}$	$\begin{array}{r} 47 \\ \times \quad F. \\ \hline \hline \hline \cdot \\ \hline 3478 \end{array}$	$\begin{array}{r} 47 \\ \times \quad \hline \hline \hline \cdot \\ \hline 3149 \end{array}$	$\begin{array}{r} 47 \\ \times \quad G. \\ \hline \hline \hline \cdot \\ \hline 3901 \end{array}$

CHAIN REACTIONS

$32 \div 4$	$\times 2$	$\div 4$	$\times 2$	2						
H. I.										
48 $\div 6$	$\times 3$	$\times 6$	$\div 3$	6						
J.										
64 $\div 8$	$\times 4$	$\times 4$	$\div 8$	2						
K.										
80 $\div 10$	$\times 5$	$\times 10$	$\div 5$	10						
L.										

I.	E.	A.	J.	F.	B.	K.	G.	C.	L.	H.	D.
8	95	28	24	74	76	32	83	39	40	16	92

BUILDING and USING TABLES

$\begin{array}{r} 25 \\ \times 0 \\ \hline 0 \end{array}$	$\begin{array}{r} 25 \\ \times 1 \\ \hline 25 \end{array}$	$\begin{array}{r} 25 \\ \times 2 \\ \hline 50 \end{array}$	$\begin{array}{r} 25 \\ \times 3 \\ \hline 75 \end{array}$	$\begin{array}{r} 25 \\ \times 4 \\ \hline 100 \end{array}$	$\begin{array}{r} 25 \\ \times 5 \\ \hline \end{array}$	$\begin{array}{r} 25 \\ \times 6 \\ \hline \end{array}$	$\begin{array}{r} 25 \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} 25 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 25 \\ \times 9 \\ \hline \end{array}$
$\begin{array}{r} 5 \\ \times 0 \\ \hline \end{array}$	$\begin{array}{r} 25 \\ \times 10 \\ \hline 250 \end{array}$	$\begin{array}{r} 25 \\ \times 20 \\ \hline 500 \end{array}$	$\begin{array}{r} 25 \\ \times 30 \\ \hline 750 \end{array}$	$\begin{array}{r} 25 \\ \times 40 \\ \hline 1000 \end{array}$	$\begin{array}{r} 25 \\ \times 50 \\ \hline \end{array}$	$\begin{array}{r} 25 \\ \times 60 \\ \hline \end{array}$	$\begin{array}{r} 25 \\ \times 70 \\ \hline \end{array}$	$\begin{array}{r} 25 \\ \times 80 \\ \hline \end{array}$	$\begin{array}{r} 25 \\ \times 90 \\ \hline \end{array}$

A.  $\begin{array}{r} 25 \overline{) 1075} \\ \underline{100} \phantom{0} \\ 75 \phantom{0} \\ \underline{75} \\ 0 \end{array}$

B.  $\begin{array}{r} 25 \overline{) 950} \\ \underline{75} \phantom{0} \\ 20 \phantom{0} \\ \underline{200} \\ 50 \end{array}$

C.  $\begin{array}{r} 25 \overline{) 1875} \\ \underline{125} \phantom{0} \\ 625 \phantom{0} \\ \underline{625} \\ 0 \end{array}$

$\begin{array}{r} 25 \overline{) 1700} \\ \underline{125} \phantom{0} \\ 450 \phantom{0} \\ \underline{450} \\ 0 \end{array}$

D.  $\begin{array}{r} 25 \overline{) 2300} \\ \underline{500} \phantom{0} \\ 1800 \phantom{0} \\ \underline{1750} \\ 500 \end{array}$

$\begin{array}{r} 25 \overline{) 2100} \\ \underline{500} \phantom{0} \\ 1600 \phantom{0} \\ \underline{1500} \\ 1000 \end{array}$

E.  $\begin{array}{r} 25 \overline{) 1625} \\ \underline{125} \phantom{0} \\ 375 \phantom{0} \\ \underline{375} \\ 0 \end{array}$

F.  $\begin{array}{r} 25 \overline{) 2425} \\ \underline{500} \phantom{0} \\ 1925 \phantom{0} \\ \underline{1900} \\ 250 \end{array}$

$\begin{array}{r} 81 \ 9 \ 1 \\ | \ | \ | \\ \hline 1 \ 1 \ 2 \end{array} 92$

$\begin{array}{r} 81 \ 9 \ 1 \\ | \ | \ | \\ \hline 0 \ 3 \ 3 \end{array}$

$\begin{array}{r} 81 \ 9 \ 1 \\ | \ | \ | \\ \hline 0 \ 7 \ 7 \end{array}$  G.

$\begin{array}{r} 81 \ 9 \ 1 \\ | \ | \ | \\ \hline 0 \ 6 \ 6 \end{array}$  H.

$\begin{array}{r} 81 \ 9 \ 1 \\ | \ | \ | \\ \hline 0 \ 5 \ 8 \end{array}$

$\begin{array}{r} 81 \ 9 \ 1 \\ | \ | \ | \\ \hline 0 \ 8 \ 8 \end{array}$  I.

$\begin{array}{r} 81 \ 9 \ 1 \\ | \ | \ | \\ \hline 1 \ 1 \ 6 \end{array}$  J.

$\begin{array}{r} 81 \ 9 \ 1 \\ | \ | \ | \\ \hline 0 \ 4 \ 7 \end{array}$

$\begin{array}{r} 81 \ 9 \ 1 \\ | \ | \ | \\ \hline \phantom{0} \phantom{0} \phantom{0} \end{array} 35$  K.

$\begin{array}{r} 81 \ 9 \ 1 \\ | \ | \ | \\ \hline \phantom{0} \phantom{0} \phantom{0} \end{array} 100$  L.

$\begin{array}{r} 81 \ 9 \ 1 \\ | \ | \ | \\ \hline \phantom{0} \phantom{0} \phantom{0} \end{array} 75$  M.

$\begin{array}{r} 81 \ 9 \ 1 \\ | \ | \ | \\ \hline \phantom{0} \phantom{0} \phantom{0} \end{array} 42$

$\begin{array}{r} 81 \ 9 \ 1 \\ | \ | \ | \\ \hline \phantom{0} \phantom{0} \phantom{0} \end{array} 85$  N.

$\begin{array}{r} 81 \ 9 \ 1 \\ | \ | \ | \\ \hline \phantom{0} \phantom{0} \phantom{0} \end{array} 62$

$\begin{array}{r} 81 \ 9 \ 1 \\ | \ | \ | \\ \hline \phantom{0} \phantom{0} \phantom{0} \end{array} 71$  O.

$\begin{array}{r} 81 \ 9 \ 1 \\ | \ | \ | \\ \hline \phantom{0} \phantom{0} \phantom{0} \end{array} 50$

F.	A.	E.	B.	D.	C.	G.	L.	H.	M.	I.	N.	J.	O.	K.
97	43	65	38	92	75	70	1,2,1	60	0,8,3	80	0,9,4	96	0,7,8	0,3,8

## CHANGE and STAMP Problems

Rules: Show a Combination of Coins or Stamps  
for the amounts shown . . . with exactly the  
number of Coins or Stamps indicated.

	50¢	25¢	10¢	5¢	1¢		Number of COINS ↓
A.						47 ¢	( 15 )
B.						95 ¢	( 9 )
C.						68 ¢	( 32 )

	16¢	8¢	4¢	2¢	1¢		Number of STAMPS ↓
D.						31 ¢	( 5 )
E.						23 ¢	( 4 )
F.						40 ¢	( 7 )

	50¢	25¢	10¢	5¢	1¢		
A.						\$ 1.40	( 11 )
						\$ 1.20	( 12 )
B.						\$ 1.71	( 13 )

	8¢	27¢	9¢	3¢	1¢		
						50 ¢	( 6 )
C.						80 ¢	( 8 )
D.						\$ 1.00	( 8 )

	50¢	25¢	10¢	5¢	1¢		
E.						71 ¢	( 25 )
F.						\$ 1.60	( 15 )
						90 ¢	( 30 )

	13¢	12¢	9¢	5¢	2¢		
						27 ¢	( 4 )
A.						49 ¢	( 5 )
B.						62 ¢	( 11 )

	50¢	25¢	10¢	5¢	1¢		
C.						\$ 1.82	( 10 )
						\$ 2.30	( 12 )
D.						\$ 1.55	( 15 )

	9¢	8¢	7¢	4¢	3¢		
E.						57 ¢	( 13 )
F.						69 ¢	( 13 )
						75 ¢	( 13 )

There may be other combinations than those shown below.

A.	B.	C.	D.	E.	F.
1,0,4,0,0	1,1,1,1,5	2,2,2,2,2	1,0,1,2,4	1,0,1,1,1	1,3,0,9,0
0,0,0,8,7	1,1,9,1,1	0,0,0,9,23	1,2,3,4,5	0,0,2,7,16	0,3,4,0,0
0,5,1,0,5	0,2,2,2,5	0,2,2,2,2	1,1,1,1,1	0,2,2,0,9	1,4,0,0,10

BUILDING and USING TABLES

$\begin{array}{r} 18 \\ \times 0 \\ \hline \end{array}$	$\begin{array}{r} 18 \\ \times 1 \\ \hline \end{array}$	$\begin{array}{r} 18 \\ \times 2 \\ \hline \end{array}$	$\begin{array}{r} 18 \\ \times 3 \\ \hline \end{array}$	$\begin{array}{r} 18 \\ \times 4 \\ \hline \end{array}$	$\begin{array}{r} 18 \\ \times 5 \\ \hline \end{array}$	$\begin{array}{r} 18 \\ \times 6 \\ \hline \end{array}$	$\begin{array}{r} 18 \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} 18 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 18 \\ \times 9 \\ \hline \end{array}$
---	---	---	---	---	---	---	---	---	---

$\begin{array}{r} 18 \\ \times 0 \\ \hline \end{array}$	$\begin{array}{r} 18 \\ \times 10 \\ \hline \end{array}$	$\begin{array}{r} 18 \\ \times 20 \\ \hline \end{array}$	$\begin{array}{r} 18 \\ \times 30 \\ \hline \end{array}$	$\begin{array}{r} 18 \\ \times 40 \\ \hline \end{array}$	$\begin{array}{r} 18 \\ \times 50 \\ \hline \end{array}$	$\begin{array}{r} 18 \\ \times 60 \\ \hline \end{array}$	$\begin{array}{r} 18 \\ \times 70 \\ \hline \end{array}$	$\begin{array}{r} 18 \\ \times 80 \\ \hline \end{array}$	$\begin{array}{r} 18 \\ \times 90 \\ \hline \end{array}$
---	--	--	--	--	--	--	--	--	--

$$\begin{array}{r} 18 \overline{) \quad 3 \quad 7 \quad 8} \\ \underline{- \quad - \quad - \quad -} \\ \underline{- \quad - \quad - \quad -} \\ \underline{- \quad - \quad - \quad -} \end{array}$$

$$\begin{array}{r} 18 \overline{) \quad 1 \quad 3 \quad 1 \quad 4} \\ \underline{- \quad - \quad - \quad -} \\ \underline{- \quad - \quad - \quad -} \\ \underline{- \quad - \quad - \quad -} \end{array}$$

$$\begin{array}{r} 18 \overline{) \quad 8 \quad 8 \quad 2} \\ \underline{- \quad - \quad - \quad -} \\ \underline{- \quad - \quad - \quad -} \\ \underline{- \quad - \quad - \quad -} \end{array}$$

$$\begin{array}{r} 18 \overline{) \quad 1 \quad 1 \quad 7 \quad 0} \\ \underline{- \quad - \quad - \quad -} \\ \underline{- \quad - \quad - \quad -} \\ \underline{- \quad - \quad - \quad -} \end{array}$$

$$\begin{array}{r} 18 \overline{) \quad 1 \quad 0 \quad 4 \quad 4} \\ \underline{- \quad - \quad - \quad -} \\ \underline{- \quad - \quad - \quad -} \\ \underline{- \quad - \quad - \quad -} \end{array}$$

$$\begin{array}{r} 18 \overline{) \quad 1 \quad 5 \quad 1 \quad 2} \\ \underline{- \quad - \quad - \quad -} \\ \underline{- \quad - \quad - \quad -} \\ \underline{- \quad - \quad - \quad -} \end{array}$$

$$\begin{array}{r} 18 \overline{) \quad 6 \quad 6 \quad 6} \\ \underline{- \quad - \quad - \quad -} \\ \underline{- \quad - \quad - \quad -} \\ \underline{- \quad - \quad - \quad -} \end{array}$$

$$\begin{array}{r} 18 \overline{) \quad 1 \quad 6 \quad 9 \quad 2} \\ \underline{- \quad - \quad - \quad -} \\ \underline{- \quad - \quad - \quad -} \\ \underline{- \quad - \quad - \quad -} \end{array}$$

36	6	1	
			34

49	7	1	
			45

64	8	1	
			63

81	9	1	
			69

36	6	1	
			57

49	7	1	
			70

64	8	1	
			104

81	9	1	
			80

36	6	1	
			90

49	7	1	
			100

64	8	1	
			55

81	9	1	
			99

36	6	1	
			71

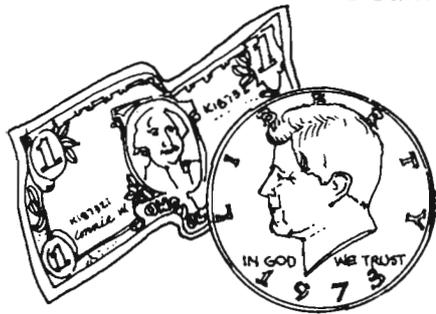
49	7	1	
			91

64	8	1	
			154



How do you feel?

DIFFERENT WAYS to Talk and Write about  
the Same Amount of Money.



\$ 1.00
\$ 1
10 D. DIMES
100¢

\$ .50
\$ $\frac{1}{2}$
5 D. DIMES
¢ A.

\$ .25
\$ $\frac{1}{4}$
2 $\frac{1}{2}$ D.
¢ B.

\$ .10
\$ $\frac{1}{10}$
D. C.
¢

\$ .05
\$ $\frac{1}{20}$
$\frac{1}{2}$ D.
¢

\$ .01
\$ $\frac{1}{100}$
$\frac{1}{10}$ D.
D. ¢

\$ .
\$ $\frac{1}{5}$
2 D.
¢ F.

\$ .
\$ $\frac{3}{10}$
D.
¢ G.

\$ .
\$ $\frac{2}{5}$
D. A.
¢ B.

\$ .
\$ $\frac{1}{2}$
D. C.
¢ D.

\$ .
\$ $\frac{3}{5}$
D. E.
¢ F.

\$ .
\$ $\frac{7}{10}$
D. G.
¢ A.

\$ .
\$ $\frac{4}{5}$
D.
¢ B.

\$ .
\$ $\frac{9}{10}$
D. D.
¢

\$ .
\$ $\frac{1}{20}$
$\frac{1}{2}$ D.
5 ¢

\$ .
\$ $\frac{3}{20}$
$1\frac{1}{2}$ D.
¢

\$ .
\$
$2\frac{1}{2}$ D.
¢ B.

\$ .
\$ $\frac{7}{20}$
$3\frac{1}{2}$ D.
¢

\$ .
\$ $\frac{9}{20}$
$4\frac{1}{2}$ D.
¢ E.

\$ .
\$
$5\frac{1}{2}$ D.
¢ G.

\$ .
\$ $\frac{1}{100}$
$\frac{1}{10}$ D.
1 ¢

\$ .
\$ $\frac{1}{50}$
D. C.
2 ¢

\$ .
\$ $\frac{3}{100}$
D. E.
3 ¢

\$ .
\$ $\frac{1}{25}$
D. G.
4 ¢

A.	B.	C.	D.	E.	F.	G.
4	25	.35	1	.05	60	.25
50	80	5	.03	6	20	55
$\frac{5}{20}, \frac{1}{4}$	.02	1	9	45	.04	$\frac{4}{10}, \frac{2}{5}$
70	40	$\frac{2}{10}, \frac{1}{5}$	.45	.20	.15	7
.01	25	.90	50	$\frac{3}{10}$	55	30

\$ .10
\$ $\frac{1}{10}$
1 D.
10 ¢

\$ .
\$ $\frac{1}{5}$
2 D.
¢ A.

\$ .
\$ $\frac{3}{10}$
D.
¢ B.

\$ .
\$ $\frac{2}{5}$
D.
¢ C.

\$ .
\$ $\frac{1}{2}$
D.
¢ D.

\$ .
\$ $\frac{3}{5}$
D.
¢ E.

\$ .
\$ $\frac{7}{10}$
D.
¢ F.

\$ .
\$ $\frac{1}{5}$
D.
¢ G.

+

\$ .
\$ $\frac{1}{10}$
D.
¢ H.

=

\$ .
\$
D.
¢

\$ .
\$ $\frac{3}{10}$
D.
¢ D.

+

\$ .
\$ $\frac{1}{5}$
D.
¢ E.

=

\$ .
\$
D.
¢

\$ .
\$ $\frac{2}{5}$
D.
¢ A.

+

\$ .
\$ $\frac{2}{5}$
D.
¢ B.

=

\$ .
\$
D.
¢

\$ .
\$ $\frac{3}{5}$
D.
¢ F.

+

\$ .
\$ $\frac{1}{10}$
D.
¢ G.

=

\$ .
\$
D.
¢

\$ .
\$ $\frac{3}{10}$
D.
¢

Multiplied by 2 =

\$ .
\$
D.
¢

\$ .
\$ $\frac{1}{10}$
D.
¢

Multiplied by 5 =

\$ .
\$
D.
¢

\$ .
\$ $\frac{9}{10}$
D.
¢

Divided by 3 =

\$ .
\$
D.
¢

A.	B.	C.	D.	E.	F.	G.	H.
20	$\frac{3}{10}$	.80	30	60	.50	10	$\frac{3}{10}$
40	7	$\frac{3}{5}$	50	20	$\frac{1}{2}$	20	5
30	30	3	.60	8	70	.30	.70
$\frac{7}{10}$	40	40	$\frac{4}{5}$	50	60	$\frac{1}{2}$	10

\$ . \$ $\frac{4}{5}$ D. ¢ A.	\$ . \$ $\frac{9}{10}$ D. ¢ B.	\$ . \$ 1 D. ¢ C.	\$ . \$ $1\frac{1}{10}$ D. ¢ D.	\$ . \$ $1\frac{1}{5}$ D. ¢ E.	\$ . \$ $1\frac{3}{10}$ D. ¢ F.	\$ . \$ $1\frac{2}{5}$ D. ¢ G.
--	---	----------------------------	--	---	--	---

\$ . \$ $1\frac{1}{10}$ D. ¢ H.	-	\$ . \$ $\frac{1}{5}$ D. ¢ A.	=	\$ . D. D. ¢ C.
\$ . \$ 1 D. ¢ B.	-	\$ . \$ $\frac{7}{10}$ D. ¢ E.	=	\$ . \$ . D. ¢ F.

\$ . \$ $1\frac{2}{5}$ D. ¢ A.	-	\$ . \$ $1\frac{1}{10}$ D. ¢ B.	=	\$ . D. D. ¢ E.
\$ . \$ $\frac{1}{2}$ D. ¢ F.	-	\$ . \$ $\frac{2}{5}$ D. ¢ G.	=	\$ . \$ . D. ¢ H.

\$ . \$ $\frac{1}{5}$ D. ¢	Multiplied by 6 =	\$ . D. D. ¢
-------------------------------------	-------------------	-----------------------

\$ . \$ $\frac{3}{10}$ D. ¢	Multiplied by 4 =	\$ . \$ . D. ¢
--------------------------------------	-------------------	-------------------------

\$ . \$ $1\frac{1}{5}$ D. ¢	Divided by 2 =	\$ . D. D. ¢
--------------------------------------	----------------	-----------------------

A.	B.	C.	D.	E.	F.	G.	H.
80	1	1.20	110	3	.30	$\frac{3}{10}$	90
140	110	100	$\frac{9}{10}$	120	130	40	3
20	90	.30	$1\frac{1}{5}$	70	50	140	$\frac{3}{5}$
$\frac{1}{10}$	100	.90	$\frac{3}{10}$	120	$1\frac{1}{5}$	.60	110

## CHANGE and STAMP Problems

Rules: Show a combination of Coins or Stamps for the amounts shown . . . with exactly the number of Coins or Stamps indicated.

	50¢	25¢	10¢	5¢	1¢		Number of COINS ↓
A.						\$ 1.30	( 12 )
						\$ 1.50	( 16 )
						\$ 1.40	( 16 )

	9¢	8¢	7¢	6¢	5¢		Number of STAMPS ↓
B.						58¢	( 10 )
						60¢	( 8 )
						57¢	( 7 )

	50¢	25¢	10¢	5¢	1¢		
						\$ 1.90	( 18 )
						\$ 2.20	( 20 )
C.						\$ 1.90	( 23 )

	9¢	8¢	7¢	6¢	5¢		
D.						69¢	( 8 )
						72¢	( 12 )
						71¢	( 11 )

	50¢	25¢	10¢	5¢	1¢		
						\$ 1.14	( 27 )
E.						\$ 3.20	( 24 )
						\$ 5.60	( 21 )

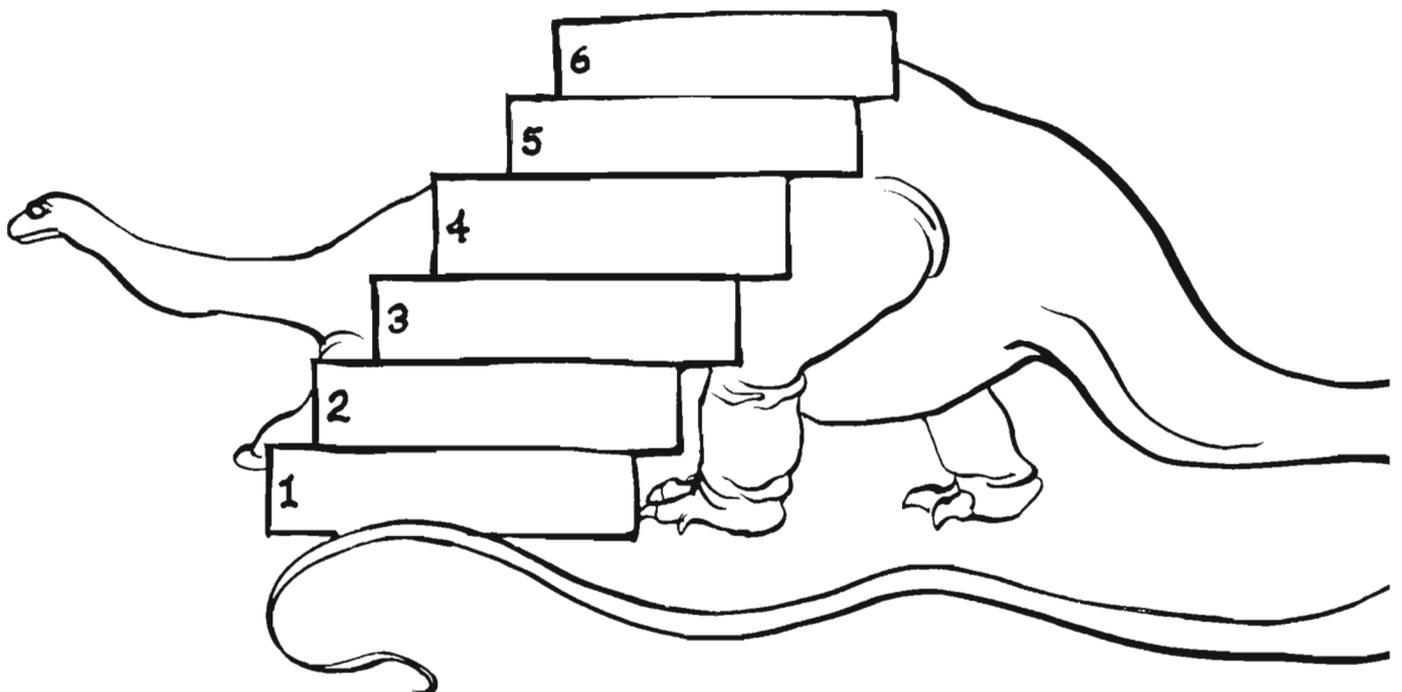
	9¢	8¢	7¢	6¢	5¢		
F.						82¢	( 10 )
						72¢	( 12 )
						70¢	( 10 )

	50¢	25¢	10¢	5¢	1¢		
						\$ 2.45	( 29 )
A.						\$ 2.35	( 27 )
						\$ 2.00	( 34 )

	9¢	8¢	7¢	6¢	5¢		
B.						\$ 1.00	( 12 )
						\$ 1.00	( 14 )
						\$ 1.00	( 15 )

There may be other combinations than those shown below.

A.	B.	C.	D.	E.	F.
2,2,0,9,2	2,0,0,0,8	0,0,4,4,4	0,5,2,7,1	1,2,3,4,5	8,0,0,0,2
1,1,1,9,0	2,2,2,2,2	3,0,0,5,15	6,1,1,0,0	5,4,3,2,1	11,0,0,0,0
0,0,20,7,0	9,0,2,0,1	0,3,0,8,0	0,0,20,0,0	0,8,8,8,0	1,3,4,6,1





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