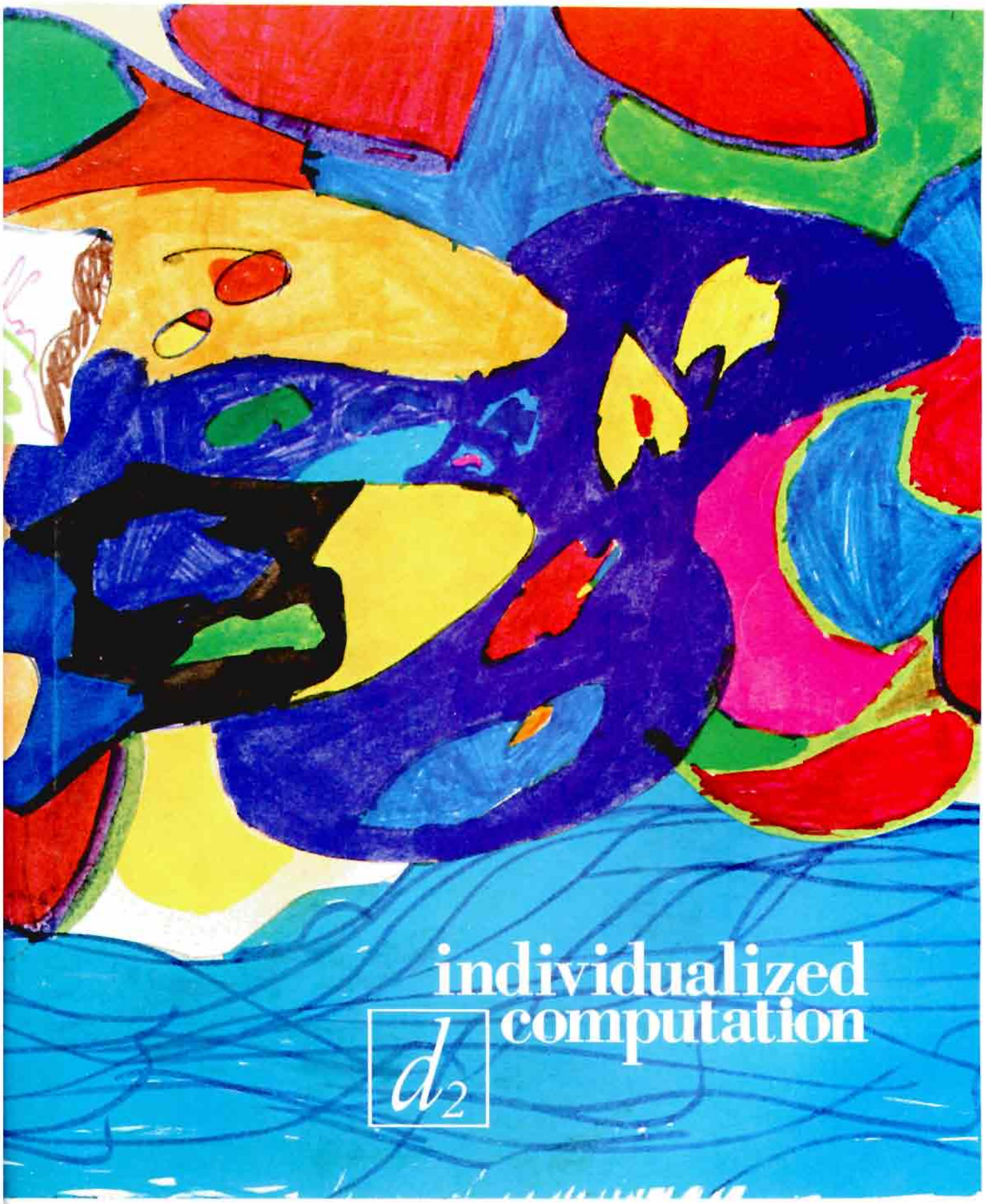
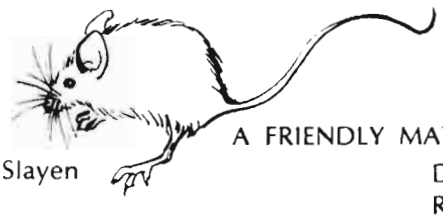


individualized computation

d_2

CD math

ROBERT W. WIRTZ



Cover Art
The Learning Community Alternative School of Ron Slayen and Joyce Vandevere at Del Rey Woods School.

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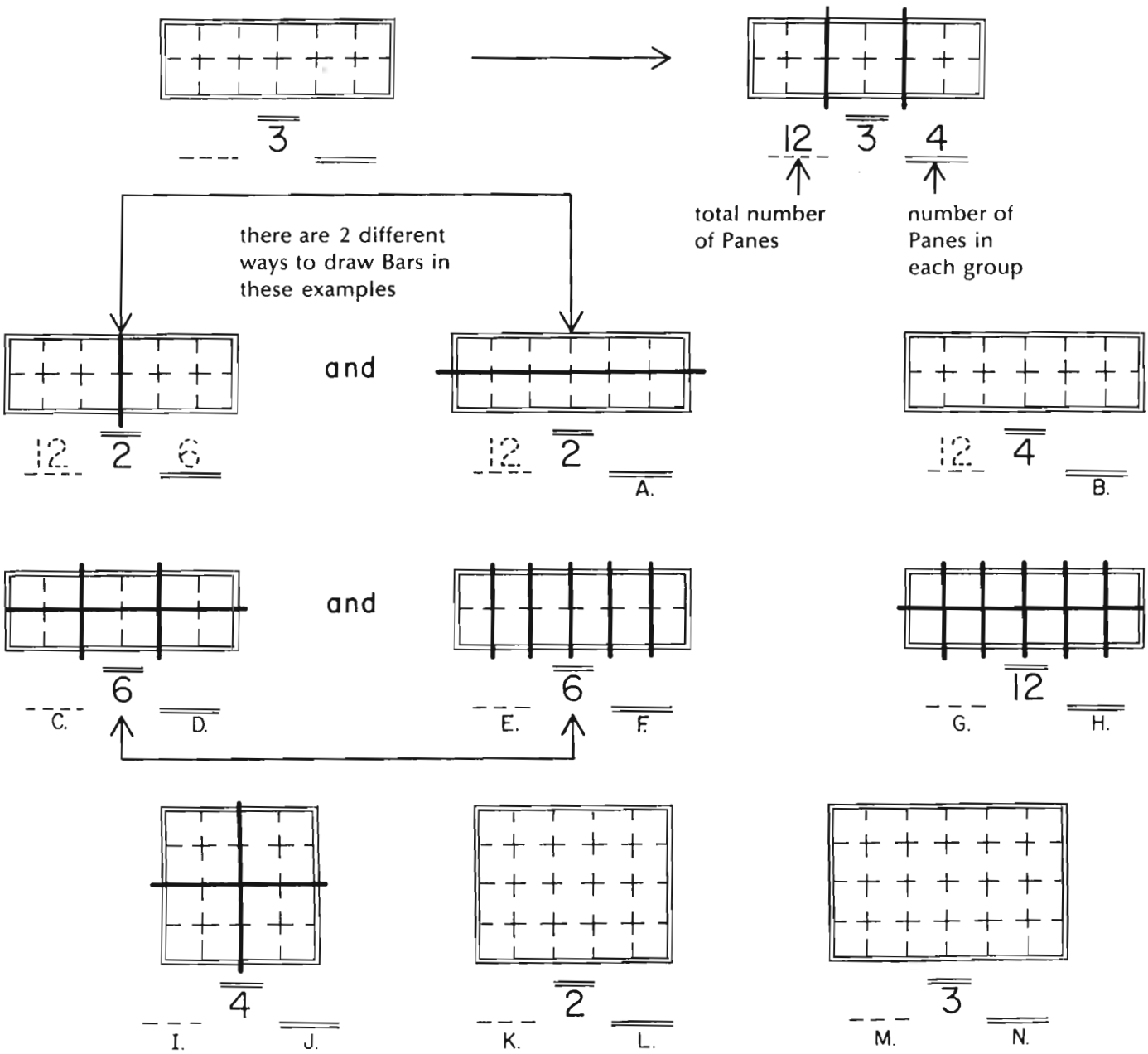
BCDE-B-3210

WINDOWS and PANES . . . and Bars

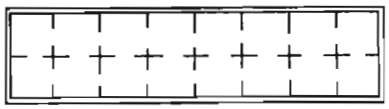
"═══"
3 . . . can be read "Bar three".

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.



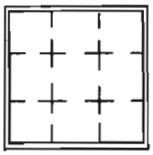
N.	A.	F.	J.	B.	G.	K.	C.	H.	L.	D.	I.	M.	E.
8	5	3	4	3	12	20	10	1	10	2	20	21	12
7	6	2	8	4	14	24	12	10	8	4	16	24	16

More "WINDOWS and PANES" . . . and Bars



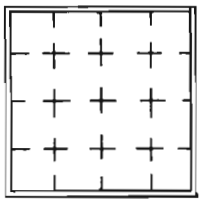
16 2

A.



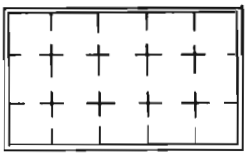
3

B. C.



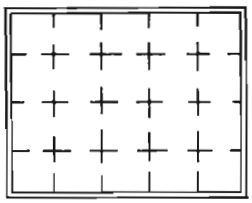
2

D. E.



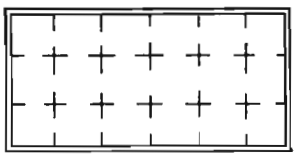
3

F. G.



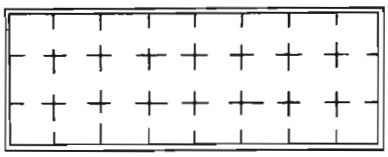
2

H. I.



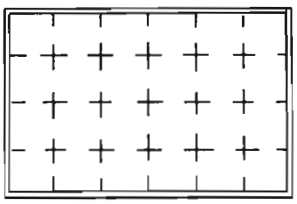
3

J. K.



4

A. B.



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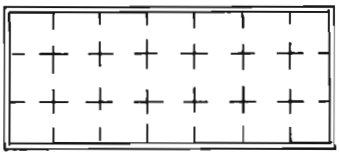
H. J.



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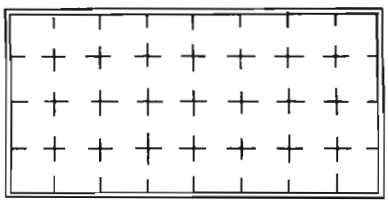
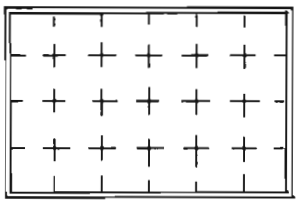
E. F.



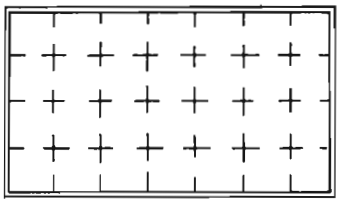
2

G. H.



4

I. K.

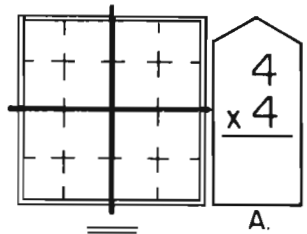


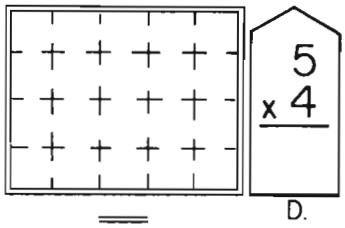
2

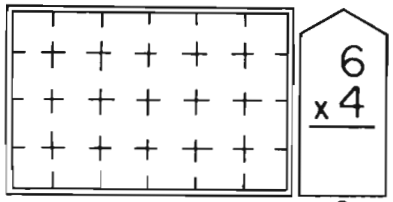
I. G.

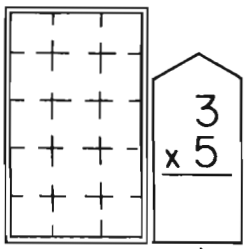
	A.	B.	C.	D.	E.	F.	G.	H.
I.	24	9	10	28	8	8	32	24
J.	8	6	24	16	18	7	5	20
K.	6	8	3	8	21	15	14	16

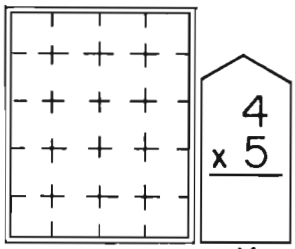
"WINDOWS and PANES" . . . and Bars . . . Tags from Beanstick-Rafts

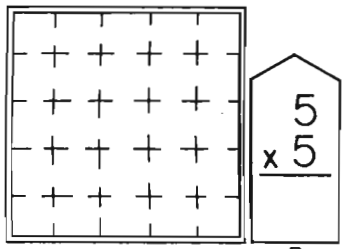


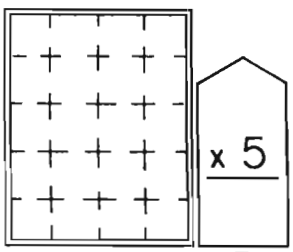


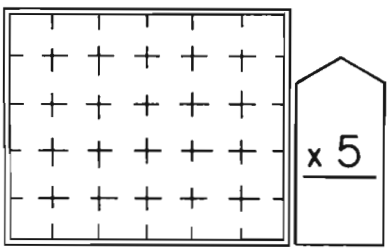


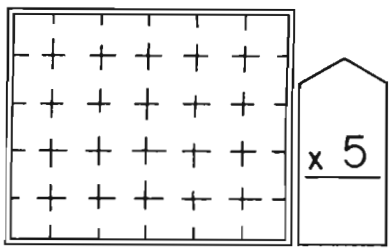


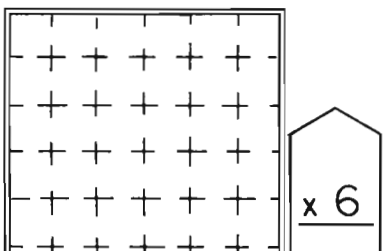


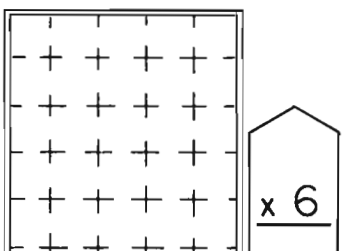


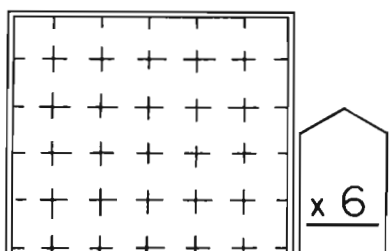






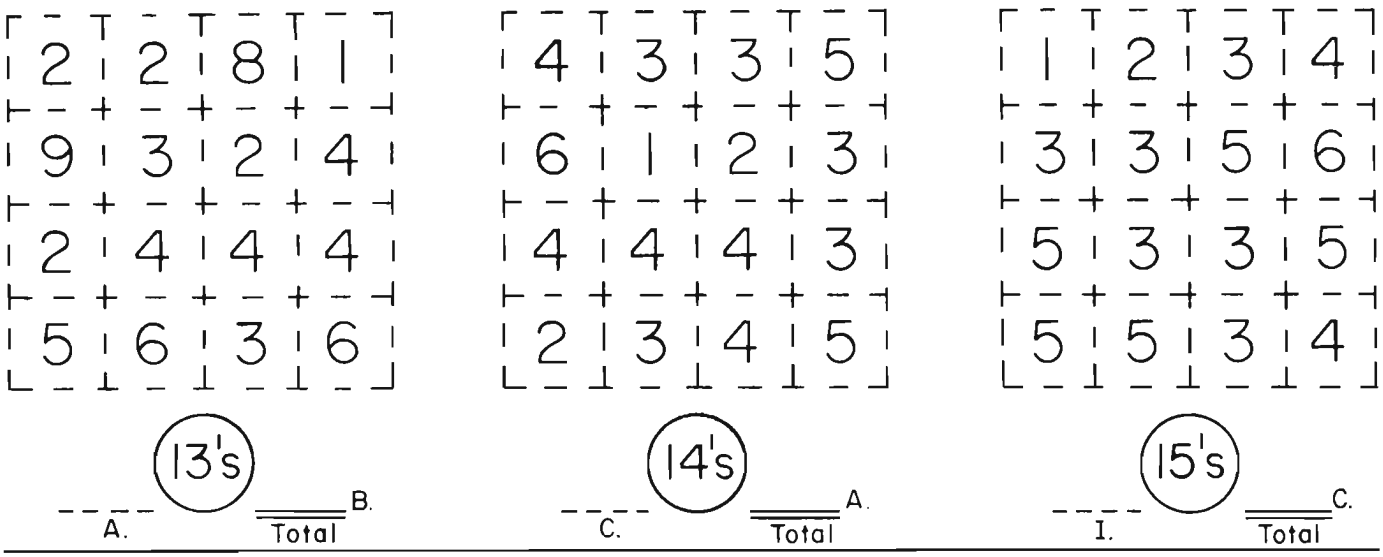




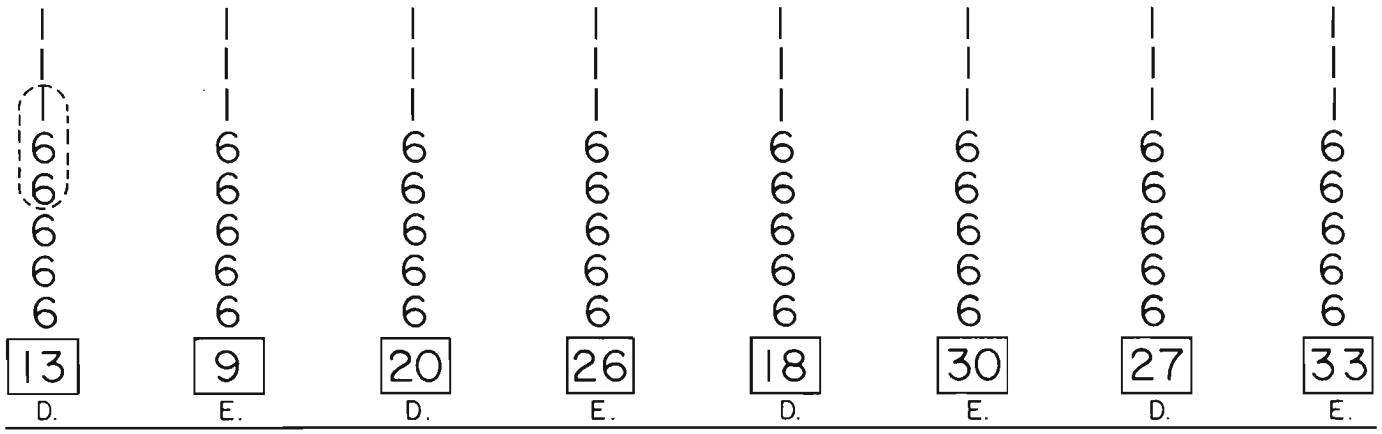


	A.	B.	C.	D.	E.	F.	G.	H.	I.	J.	K.
L.	12	20	20	4	24	5	36	30	17	15	30
M.	5	25	10	12	20	30	24	23	3	10	20
N.	16	25	9	20	19	6	15	15	30	25	36

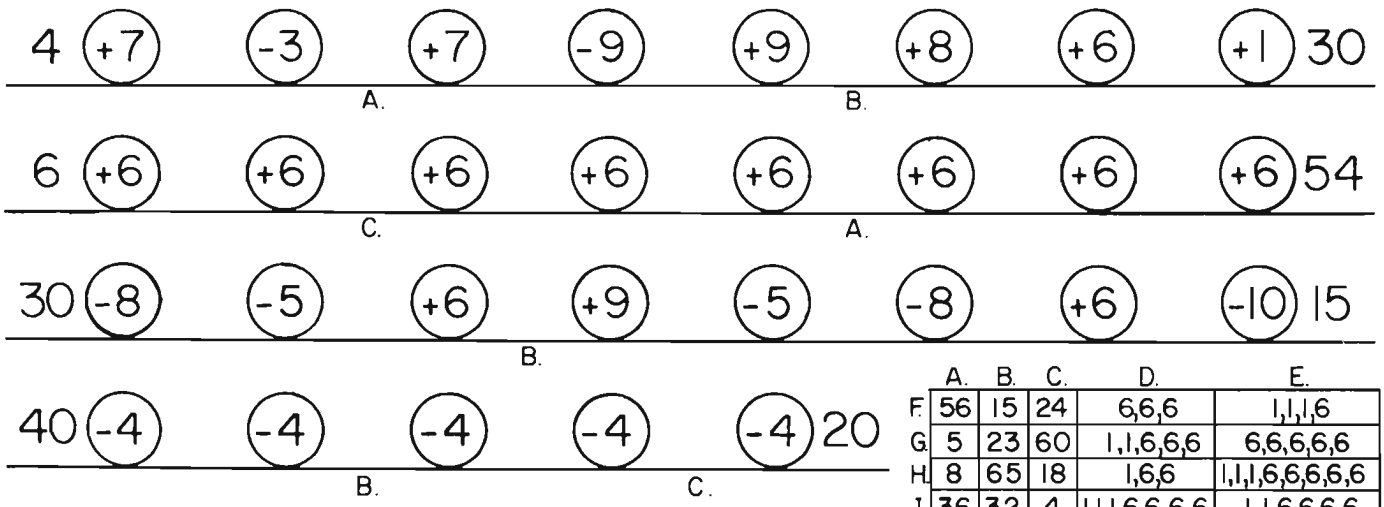
FENCE ARITHMETIC



LOOP ARITHMETIC



CHAIN REACTIONS

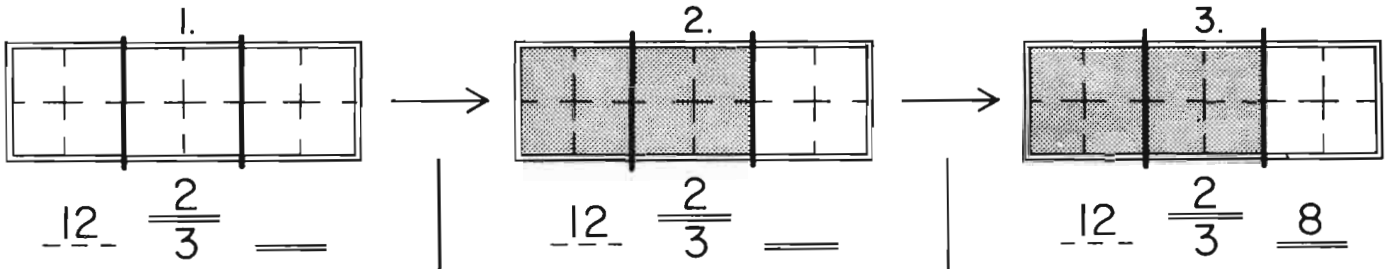


	A.	B.	C.	D.	E.
F.	56	15	24	6,6,6	1,1,1,6
G.	5	23	60	1,1,6,6,6	6,6,6,6,6
H.	8	65	18	1,6,6	1,1,1,6,6,6,6,6
I.	36	32	4	1,1,1,6,6,6,6	1,1,6,6,6,6

WINDOWS and PANES . . . Bars and Shading

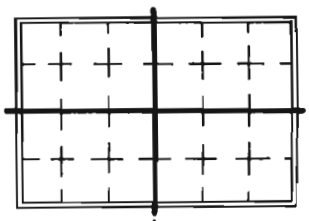
1. Use bars to make 3 groups → $\frac{2}{3}$ ← 2. Shade this number of those groups

3. Report the number of panes Shaded

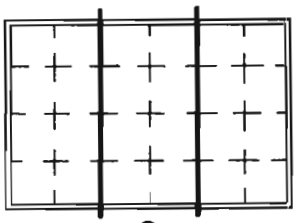


12 $\frac{2}{3}$ ___ 12 $\frac{2}{3}$ ___ 12 $\frac{2}{3}$ 8

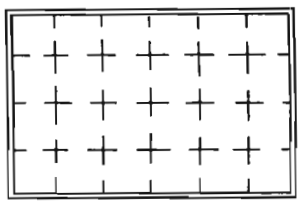
1. "Bar Three" | 2. Shade 2 groups | 3. Report panes shaded



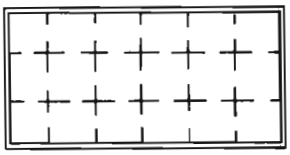
24 $\frac{1}{4}$ A.



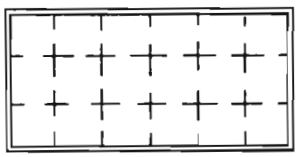
B. $\frac{2}{3}$ C.



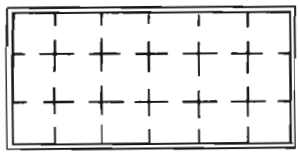
D. $\frac{3}{6}$ E.



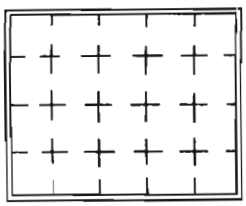
F. $\frac{1}{2}$ G.



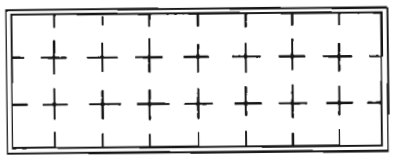
H. $\frac{1}{3}$ I.



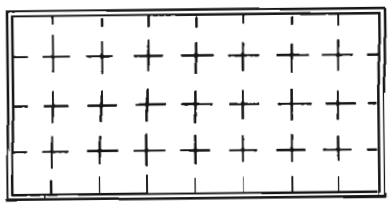
J. $\frac{2}{6}$ A.



B. $\frac{3}{4}$ C.



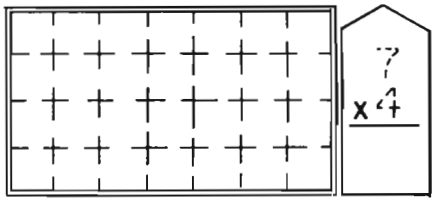
D. $\frac{2}{3}$ E.



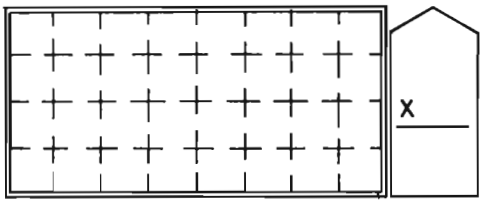
F. $\frac{2}{4}$ G.

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

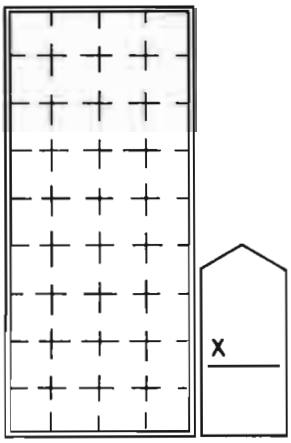
WINDOWS and PANES . . . Bars and Shading and Tags



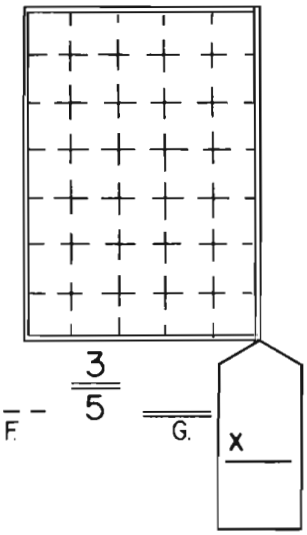
28 $\frac{1}{4}$ = A.



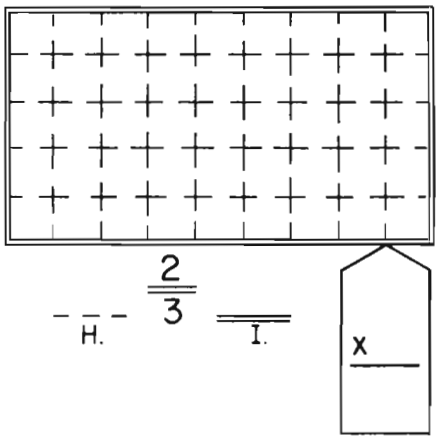
$\frac{2}{4}$ = B. C.



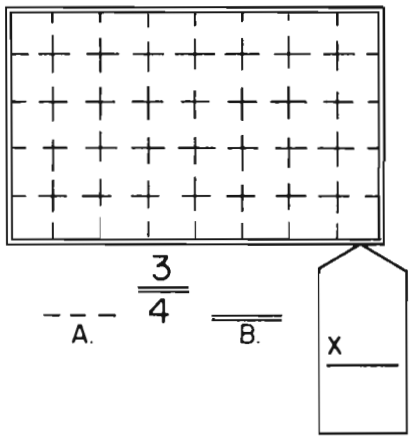
$\frac{3}{6}$ = D.



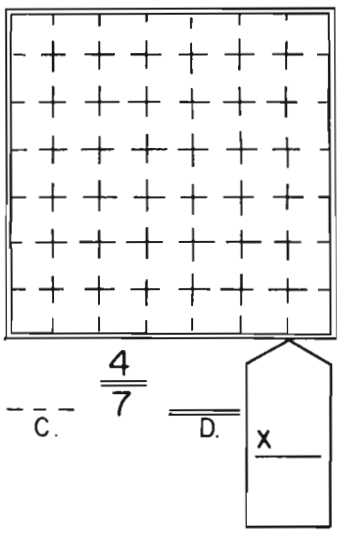
$\frac{3}{5}$ = F. G.



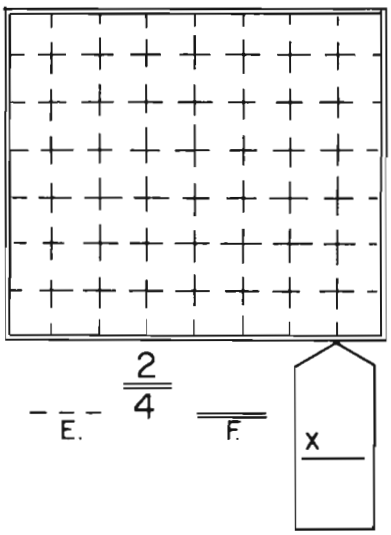
$\frac{2}{3}$ = H. I.



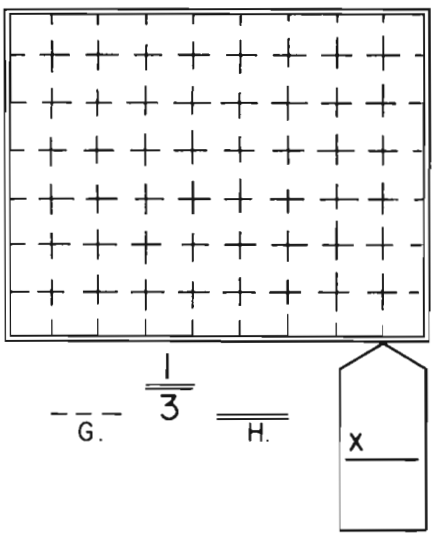
$\frac{3}{4}$ = A. B.



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



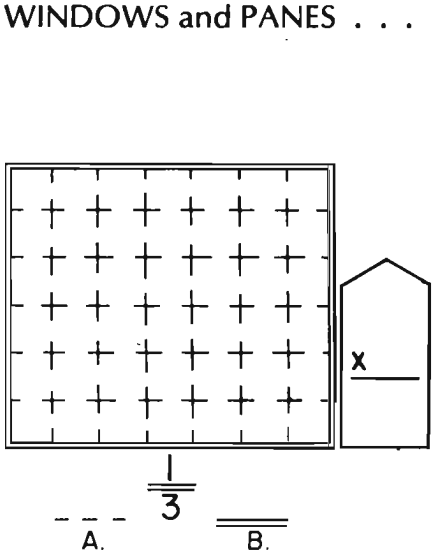
$\frac{2}{4}$ = E. F.

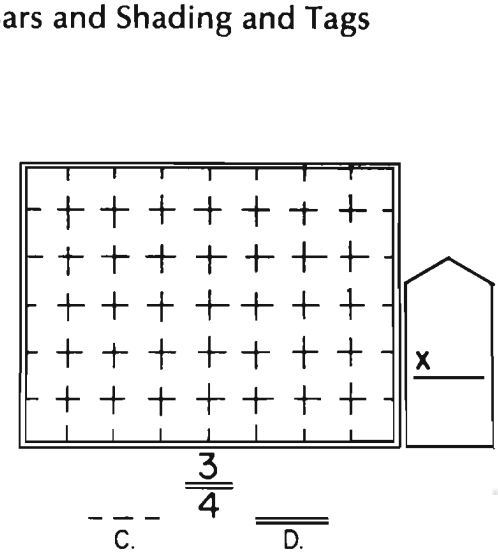


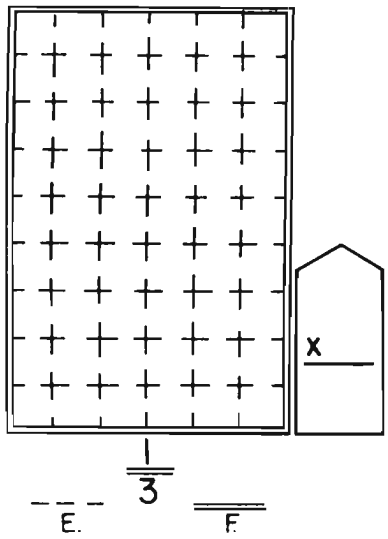
$\frac{1}{3}$ = G. H.

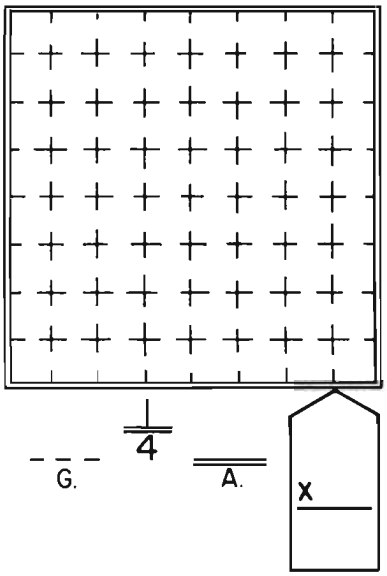
A.	B.	C.	D.	E.	F.	G.	H.	I.
7	30	49	36	6	28	21	45	32
40	32	16	28	56	35	63	21	30

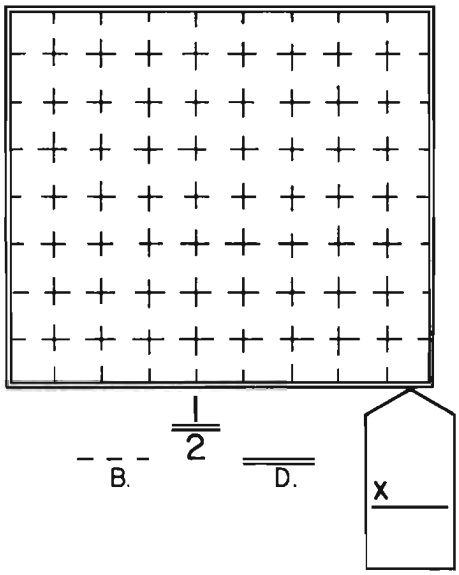
WINDOWS and PANES . . . Bars and Shading and Tags

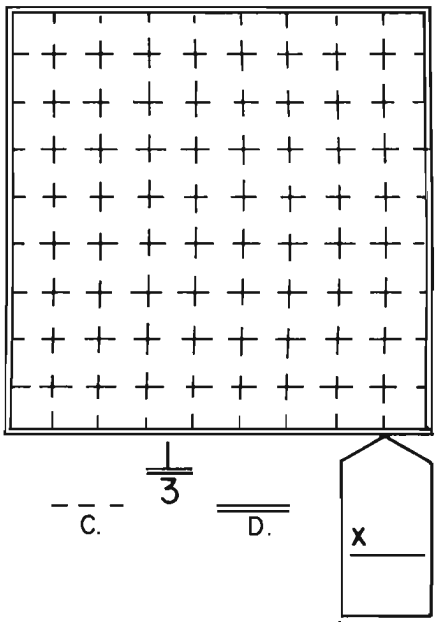


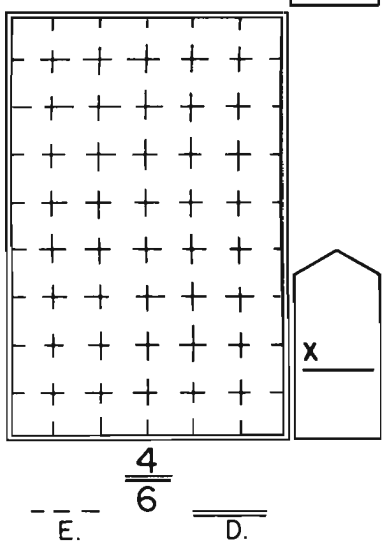


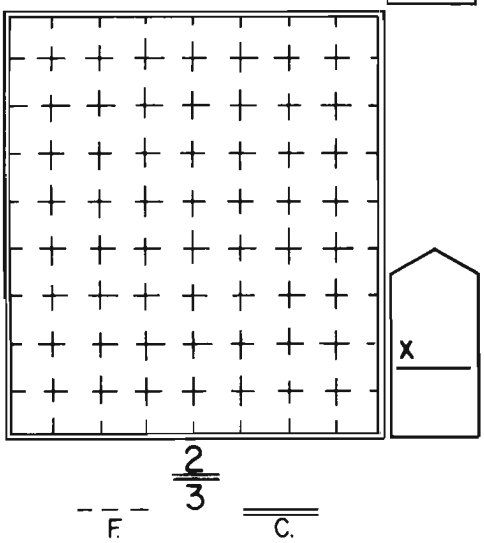


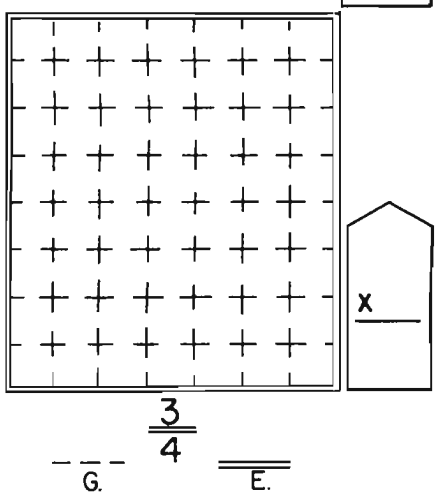






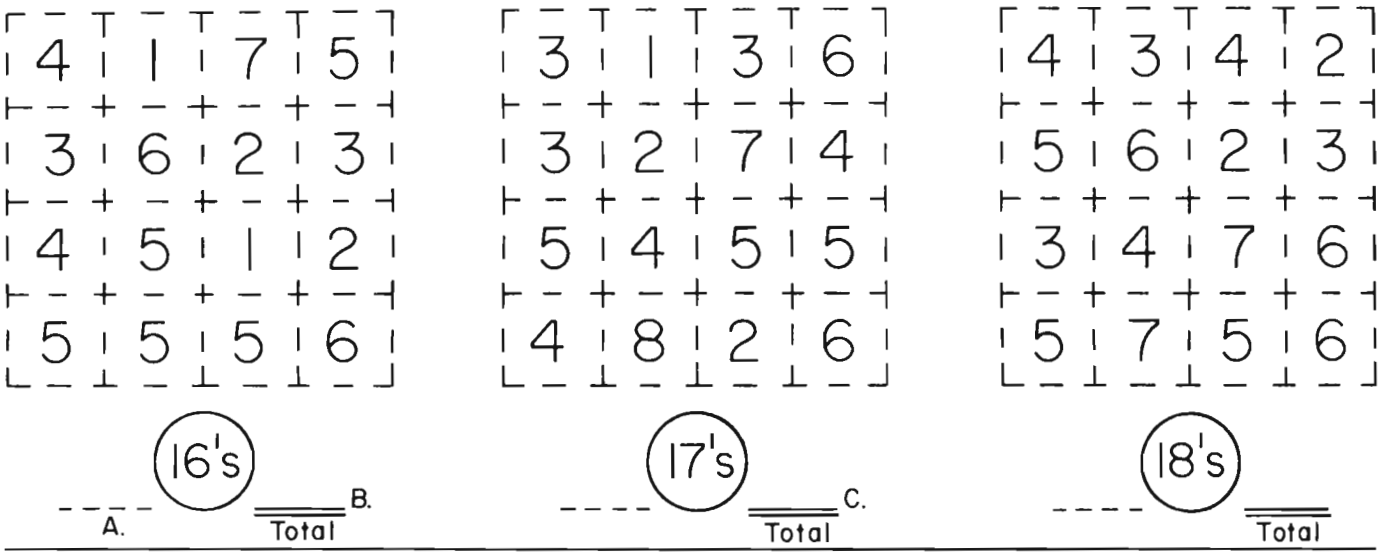




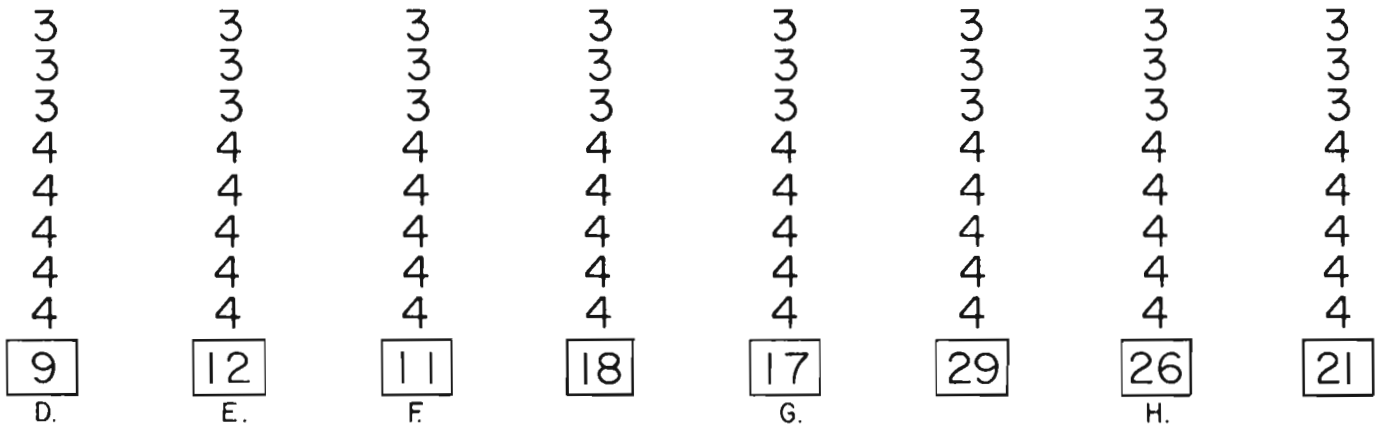


A.	B.	C.	D.	E.	F.	G.
42	72	81	36	42	18	64
16	14	48	27	54	72	56

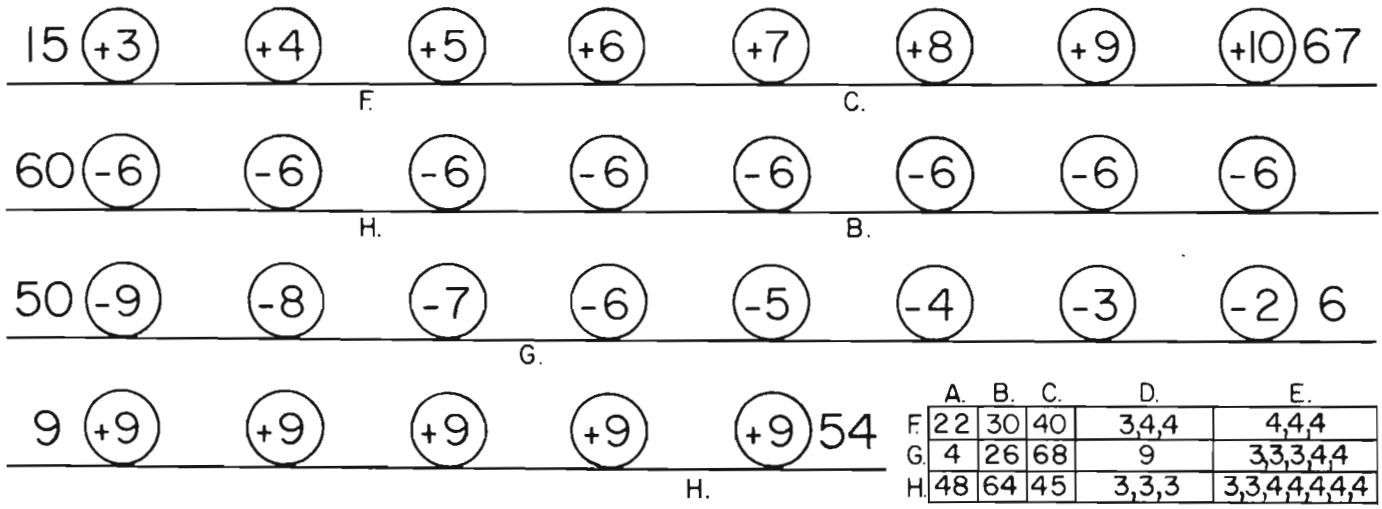
FENCE ARITHMETIC



LOOP ARITHMETIC



CHAIN REACTIONS



	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

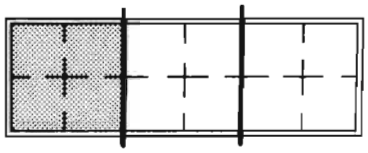
Windows and Panes . . . Bars and Shading

"1/2" can be read "one half"
"1/3" can be read "one third"
"2/3" can be read "two thirds"

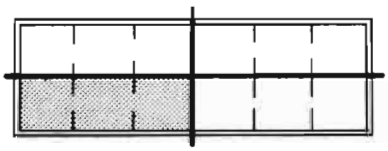
"1/4" or "one fourth"
"2/4" or "two fourths"
"3/4" or "three fourths"

"1/5" or "one fifth"
"3/8" or "three eighths"
"7/9" or "seven ninths"

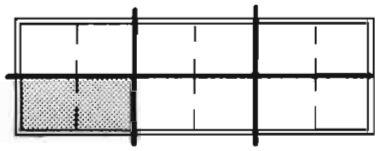
Etc.



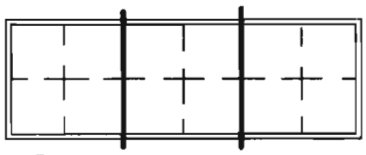
$\frac{1}{3}$ of 12 is ___ A.



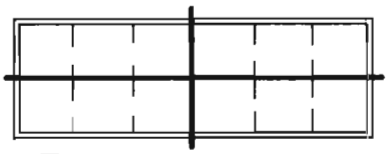
$\frac{1}{4}$ of 12 is ___ B.



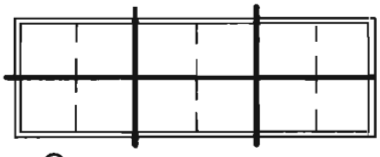
$\frac{1}{6}$ of 12 is ___ C.



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



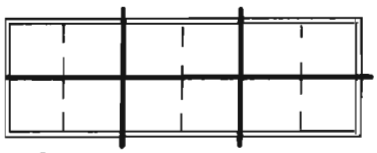
$\frac{3}{4}$ of ___ is ___ E.



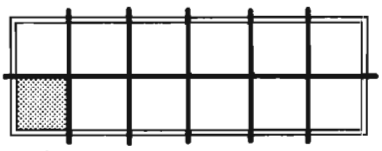
$\frac{2}{6}$ of ___ is ___ F.

IN SHORT-HAND

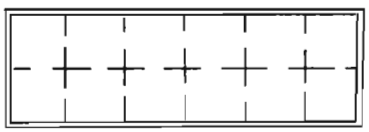
The idea of "½ of 12 is 6" can be written "½x12=6"



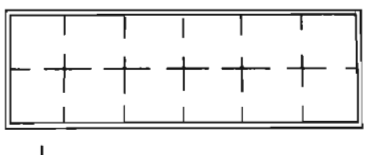
$\frac{4}{6}$ x 12 = ___ A.



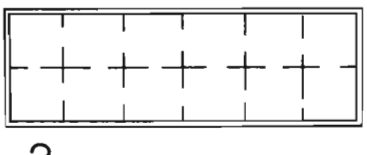
$\frac{1}{12}$ x 12 = ___ B.



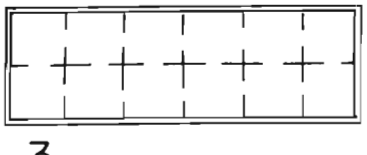
$\frac{6}{12}$ x 12 = ___ C.



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



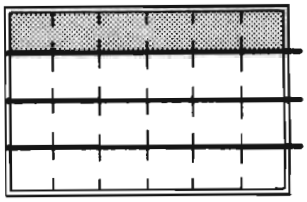
$\frac{2}{4}$ x ___ = ___ E.



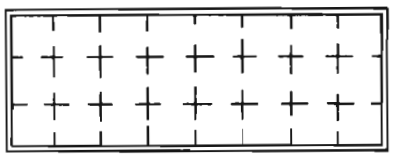
$\frac{3}{6}$ x ___ = ___ F.

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

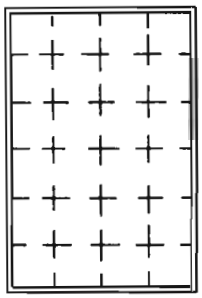
WINDOWS and PANES . . . Bars and Shading



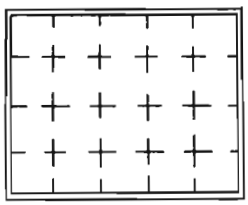
$\frac{1}{4} \times \underline{\quad} = \underline{\quad}$ A. B.



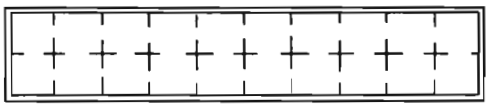
$\frac{2}{4} \times \underline{\quad} = \underline{\quad}$ F. D.



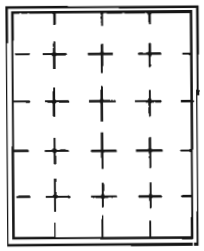
$\frac{3}{4} \times \underline{\quad} = \underline{\quad}$ A. B.



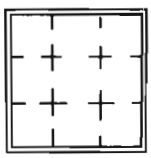
$\frac{1}{5} \times \underline{\quad} = \underline{\quad}$ C.



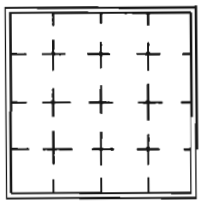
$\frac{2}{5} \times \underline{\quad} = \underline{\quad}$ E.



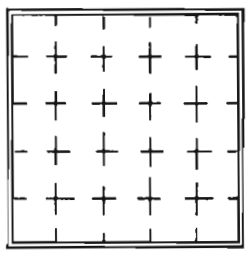
$\frac{3}{5} \times \underline{\quad} = \underline{\quad}$ D.



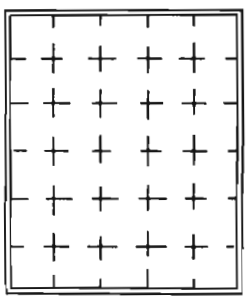
$\frac{2}{3} \times \underline{\quad} = \underline{\quad}$ B.



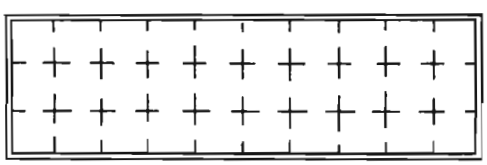
$\frac{3}{4} \times \underline{\quad} = \underline{\quad}$ F.



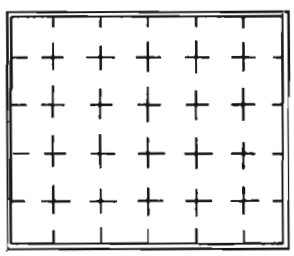
$\frac{4}{5} \times \underline{\quad} = \underline{\quad}$ E.



$\frac{1}{2} \times \underline{\quad} = \underline{\quad}$ C.



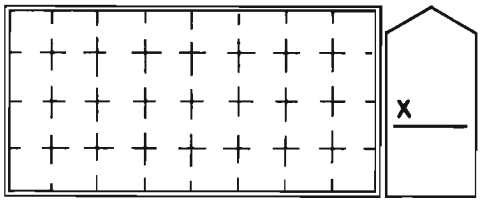
$\frac{3}{6} \times \underline{\quad} = \underline{\quad}$ E.



$\frac{5}{10} \times \underline{\quad} = \underline{\quad}$ C.

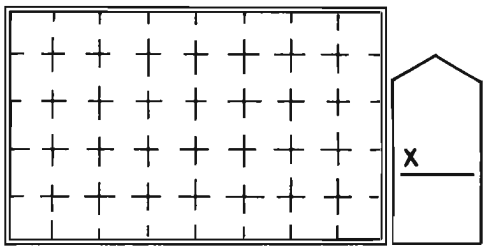
	A.	B.	C.	D.
E.	20	6	15	8
F.	24	18	4	12

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



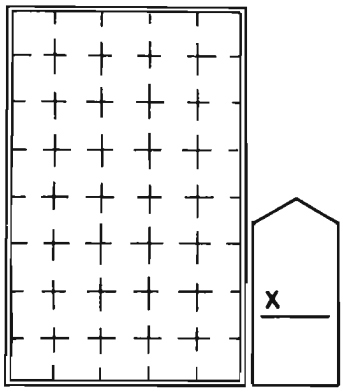
$\frac{3}{4}$

A. B.



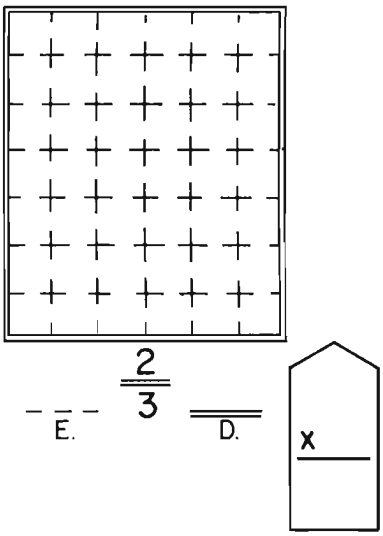
$\frac{2}{5}$

C. D.



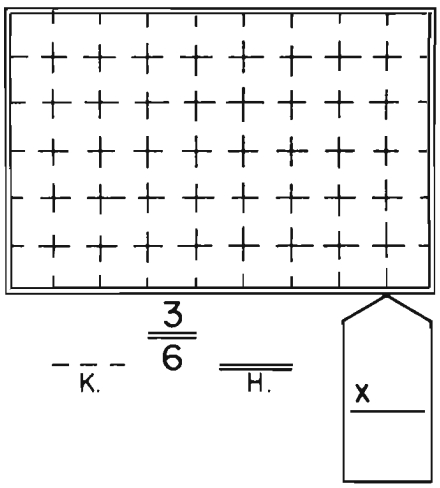
$\frac{1}{2}$

C. F.



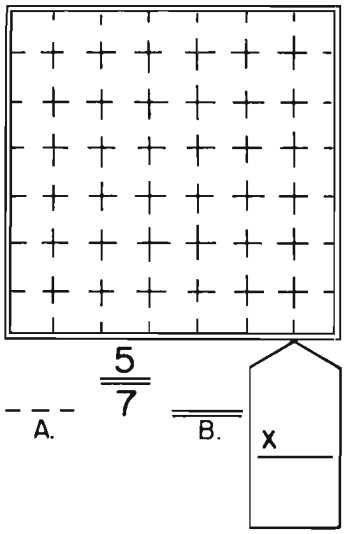
$\frac{2}{3}$

E. D.



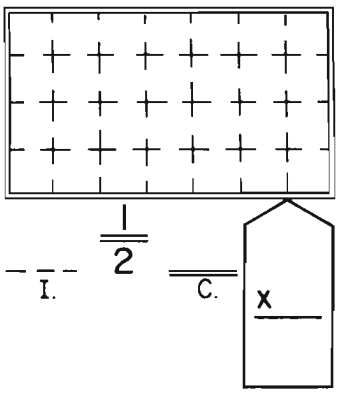
$\frac{3}{6}$

K. H.



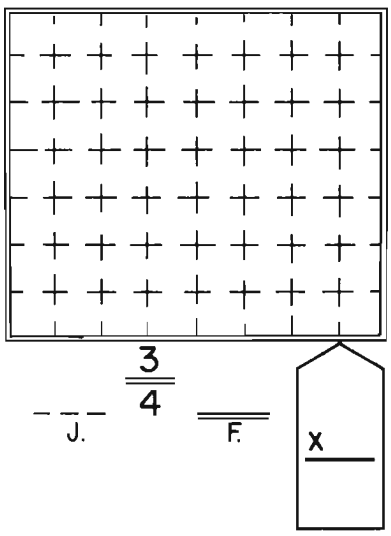
$\frac{5}{7}$

A. B.



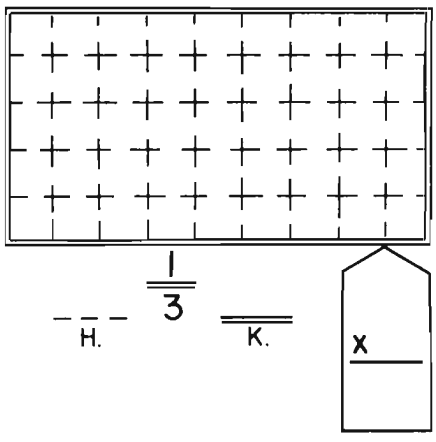
$\frac{1}{2}$

I. C.



$\frac{3}{4}$

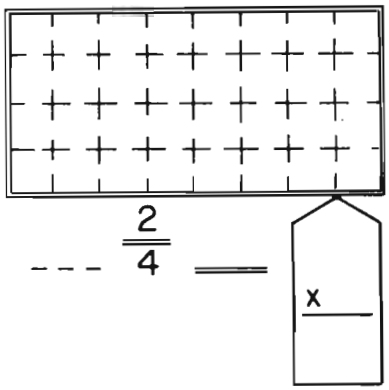
J. F.

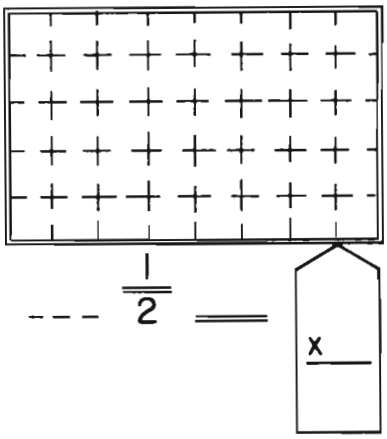


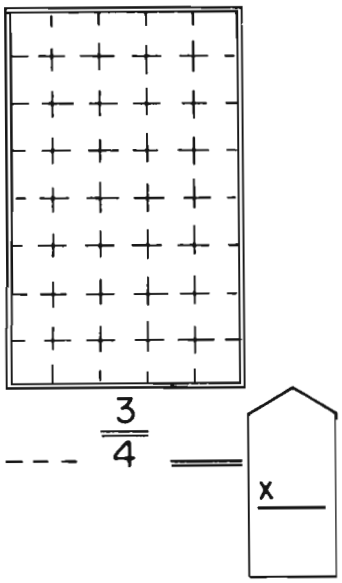
$\frac{1}{3}$

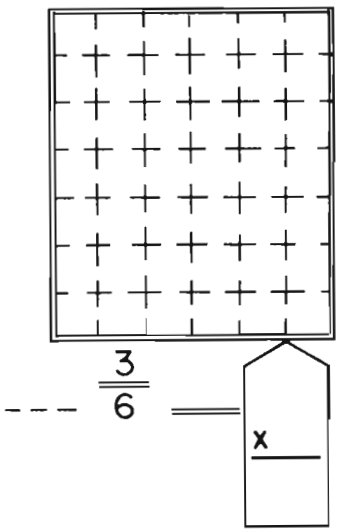
H. K.

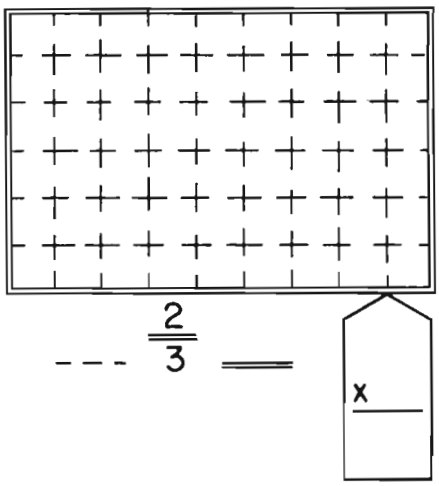
A.	E.	I.	B.	F.	J.	C.	G.	K.	D.	H.
32	40	35	24	20	14	40	18	15	16	27
49	42	28	35	42	56	14	27	54	28	45

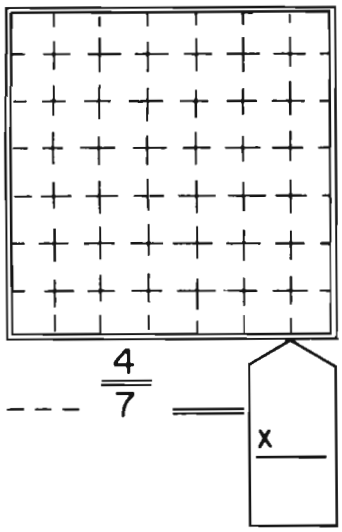

2/4 = x

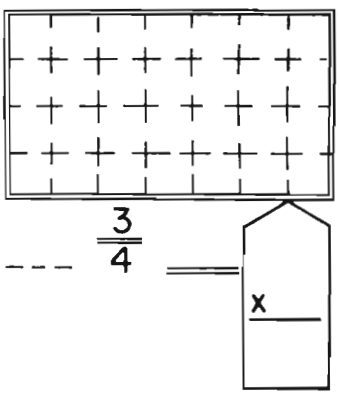

1/2 = x

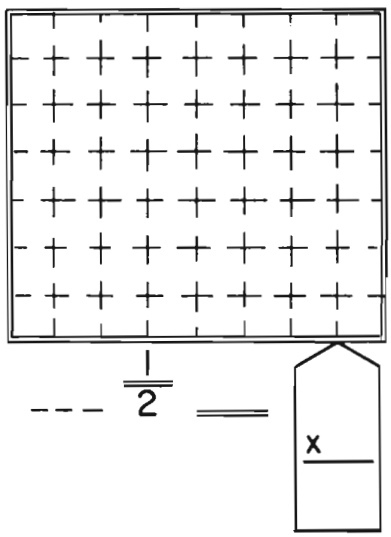

3/4 = x

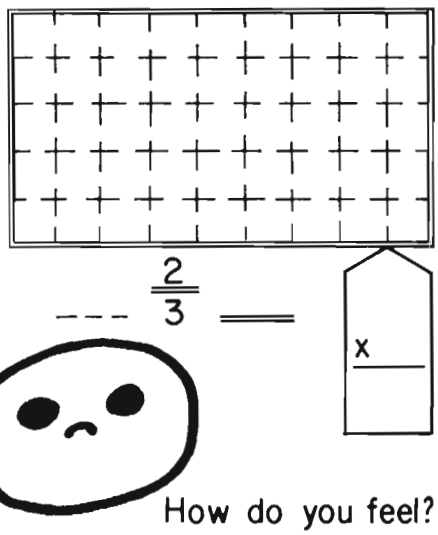

3/6 = x

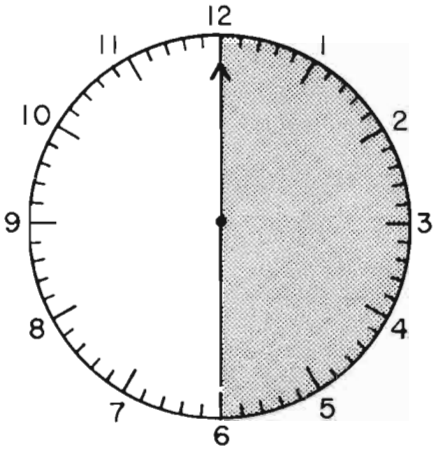

2/3 = x


4/7 = x


3/4 = x


1/2 = x

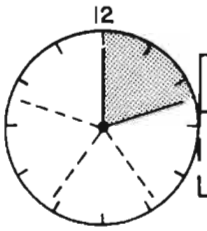

2/3 = x
How do you feel?



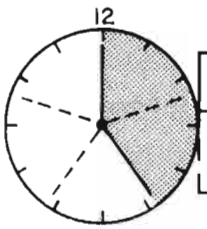
30 minutes
$\frac{1}{2}$ hours

"DOUBLE - TALK" . . . in $\frac{\text{Minutes (M)}}{\text{Hours (H)}}$

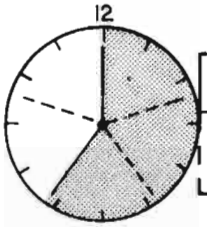
1 Hour=60 Minutes



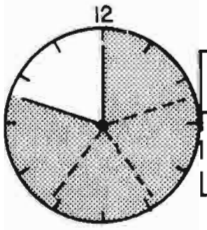
12 m
$\frac{1}{5}$ h



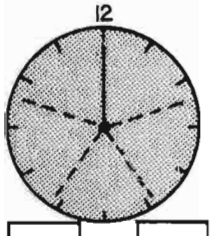
24 m
$\frac{2}{5}$ h



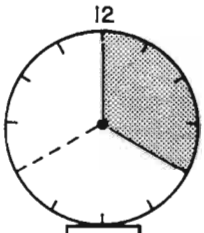
I. m
$\frac{3}{5}$ h



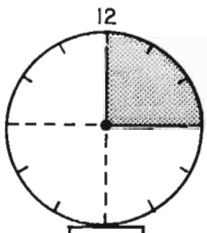
J. m
$\frac{4}{5}$ h



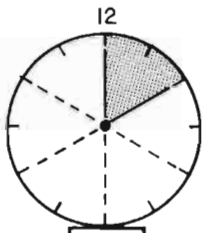
60 | 60 m
$\frac{5}{5}$ or 1 h



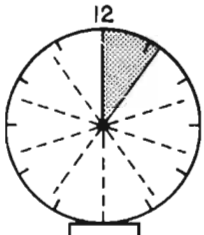
20 m
$\frac{1}{3}$ h



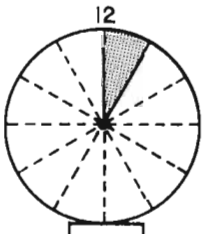
15 m
h A.



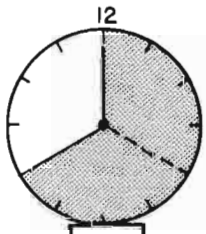
10 m
h B.



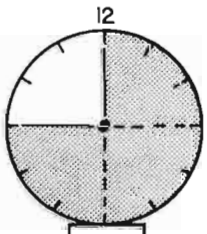
6 m
$\frac{1}{10}$ h



5 m
$\frac{1}{12}$ h



40 m
h D.



45 m
h C.

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

$\frac{1}{2}$ hour = ____ minutes (K.)

$\frac{1}{3}$ hour = ____ minutes

$\frac{2}{3}$ hour = ____ minutes

$\frac{1}{4}$ hour = ____ minutes (L.)

$\frac{3}{4}$ hour = ____ minutes (M.)

$\frac{1}{5}$ hour = ____ minutes

m	20	+	10	=	N.
h	$\frac{1}{3}$	+	$\frac{1}{6}$	=	R.

m	45	−	15	=	30
h	$\frac{3}{4}$	−		=	Q.

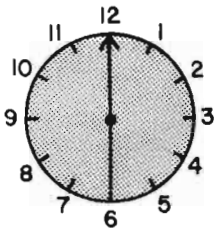
20 min. + 10 min. = 30 min.

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

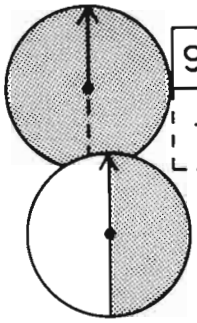
45 min. − 15 min. = 30 min.

$\frac{3}{4}$ hr. − $\frac{1}{4}$ hr. = ____ hr. (R.)

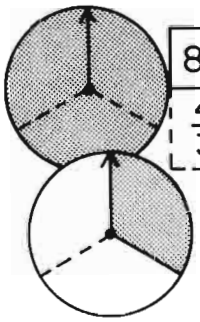
A.	G.	M.	B.	H.	N.	C.	I.	O.	D.	J.	P.	E.	K.	Q.	F.	L.	R.
$\frac{1}{4}$	10	45	$\frac{1}{6}$	15	30	$\frac{3}{4}$	36	$\frac{1}{2}$	$\frac{2}{3}$	48	$\frac{1}{4}$	12	30	$\frac{1}{2}$	18	15	$\frac{1}{2}$



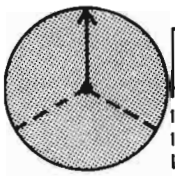
60 = $\frac{2}{2}$ or 60 = 1



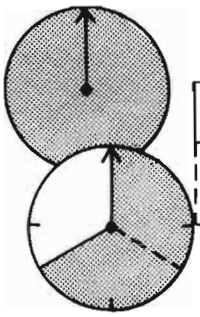
90 = $\frac{3}{2}$ or 90 = $1\frac{1}{2}$



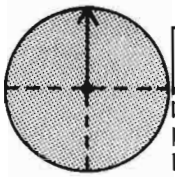
80 = $\frac{4}{3}$ or 80 = D.



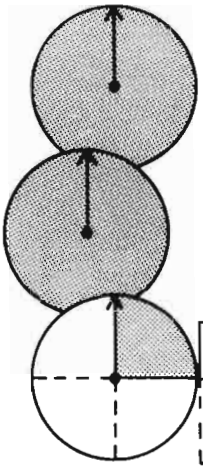
60 = A. or = 1



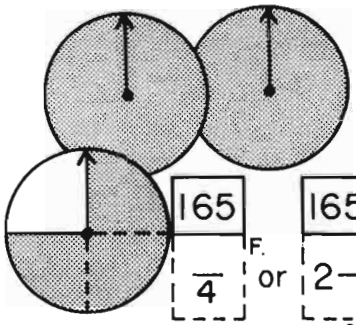
100 = $\frac{5}{3}$ or 100 = E.



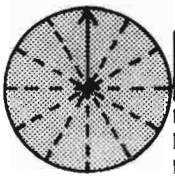
= B. or 60 = 1



135 = $\frac{9}{4}$ or = $2\frac{1}{4}$



165 = F. $\frac{}{4}$ or 165 = 2– G.



$\frac{12}{12}$ = C. or =

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

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

m	10	+	10	=	
h		+		=	
					S.

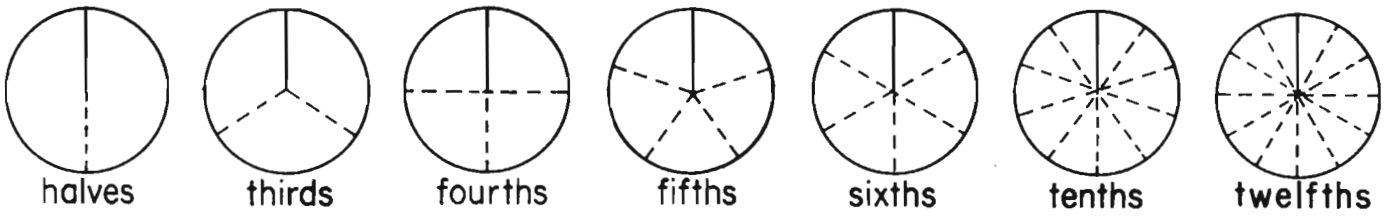
m	45	+	45	=	
h		+		=	

m	30	–	20	=	10
h		–		=	
					V.

m	60	–	12	=	
h		–		=	
	W.		X.		

m	80	–	40	=	
h		–		=	

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



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	1	$\frac{1}{2}$	A.		B.		C.	$\frac{2}{5}$			D.	

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

$20 + 25 = 45$; $\frac{1}{3} + \frac{5}{12} =$ A.

$18 + \quad = \quad$; $\quad + \frac{2}{5} = \quad$ B.

$\quad + \quad = \quad$; $\frac{3}{4} + \frac{1}{2} =$ D.

$20 - 15 = \quad$; $\quad - \quad = \quad$ E.

$\quad - \quad = \quad$; $1\frac{1}{4} - \frac{3}{4} = \quad$ F.

$\quad - \quad = \quad$; $1 - \frac{1}{12} = \quad$ G.

$\quad + \quad = \quad$; $\frac{2}{3} + \frac{2}{3} =$ H.

$\quad - \quad = \quad$; $\frac{1}{2} - \frac{1}{6} = \quad$ I.

$\quad + \quad = \quad$; $\frac{2}{5} + \frac{1}{10} =$ J.

$\frac{1}{5} + \frac{1}{5} =$ K.

$\frac{1}{2} + \frac{1}{4} =$ L.

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

(2x) $15 = 30$; $\frac{1}{4} = \quad$ M.

(3x) $10 = \quad$; $\frac{1}{5} = \quad$ N.

(5x) $6 = \quad$; $\quad = \quad$ O. P.

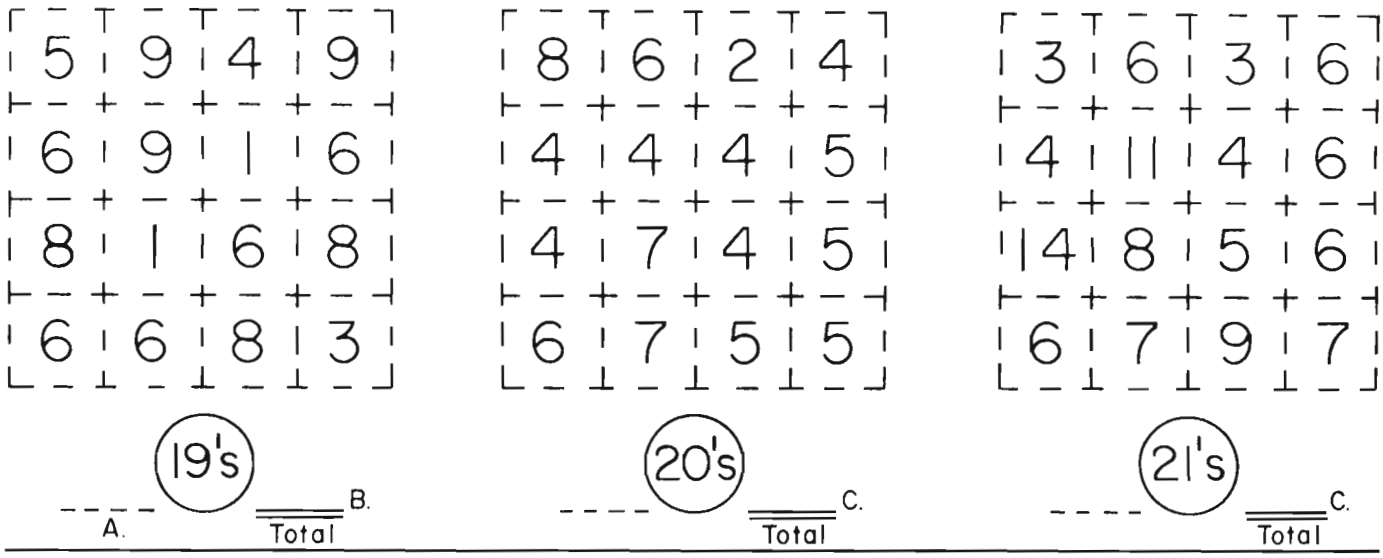
40 (÷2) $= 20$; $\frac{2}{3} = \quad$ Q.

45 (÷3) $= \quad$; $\frac{3}{4} = \quad$ R.

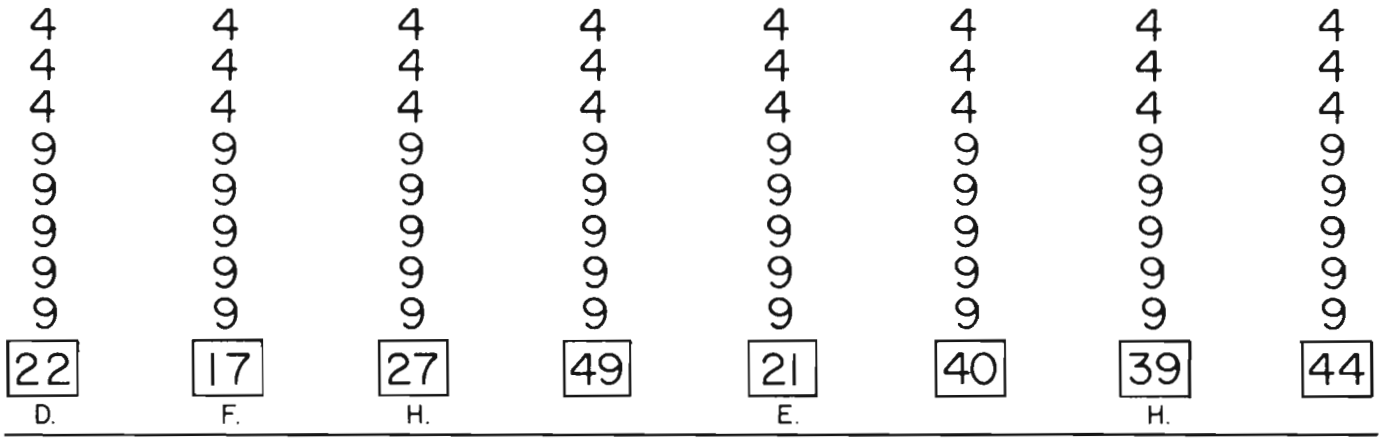
24 (÷4) $= \quad$; $\quad = \quad$ S. T.

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

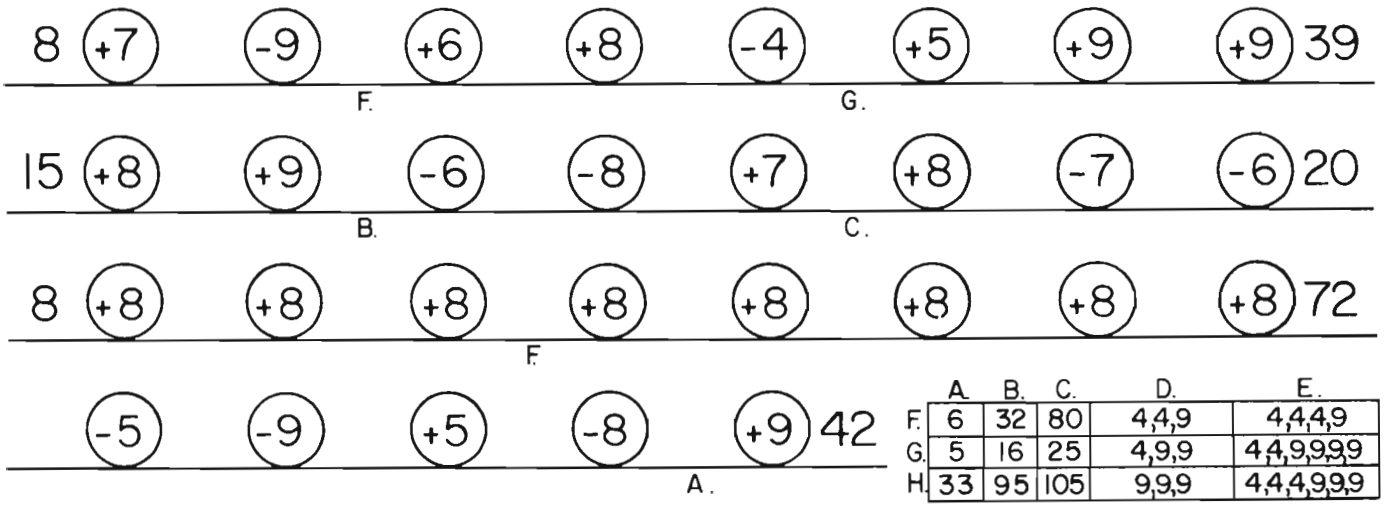
FENCE ARITHMETIC



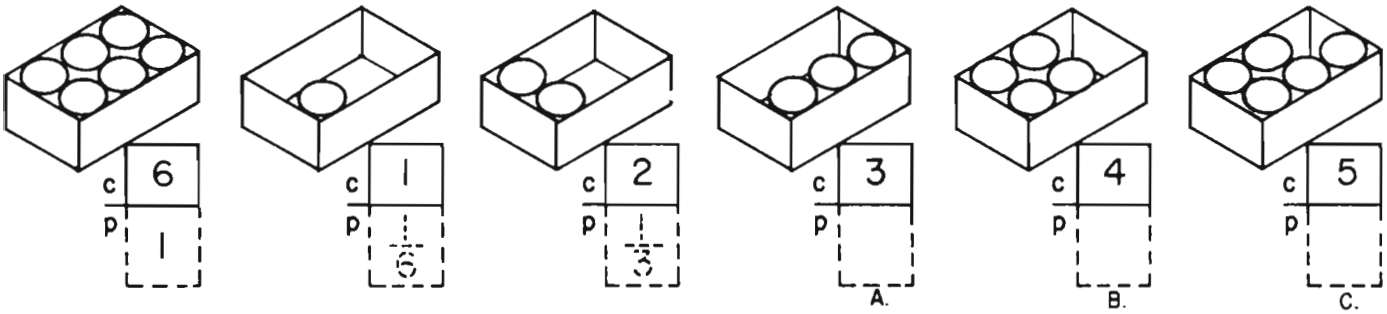
LOOP ARITHMETIC



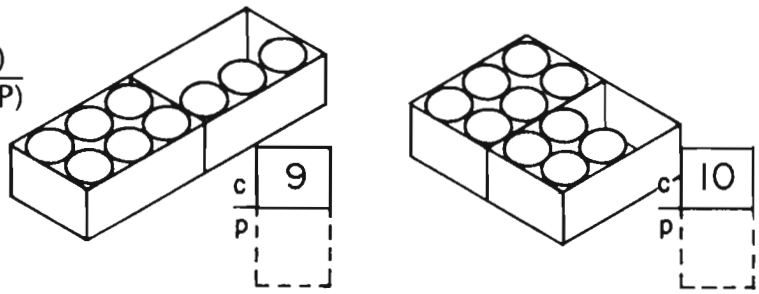
CHAIN REACTIONS



	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
H.	33	95	105	9,9,9	4,4,4,9,9,9



DOUBLE-TALK . . . about . . . $\frac{\text{Cans (C)}}{\text{6-Packs (P)}}$

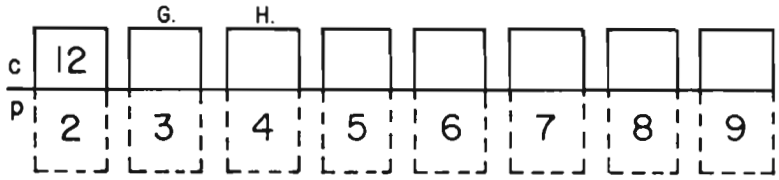


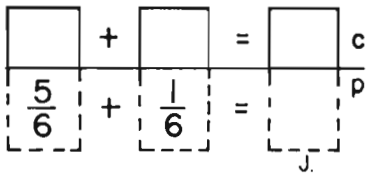
"One Six-Pack has Six Cans"

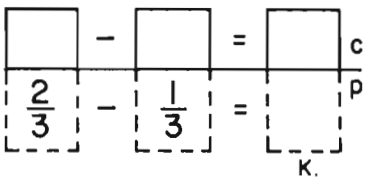
$\frac{1}{2}$ six-pack = ____cans

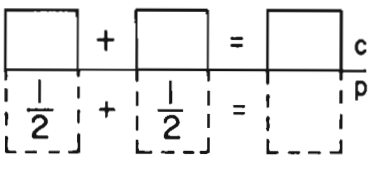
$\frac{5}{6}$ six-pack = ____cans
E.

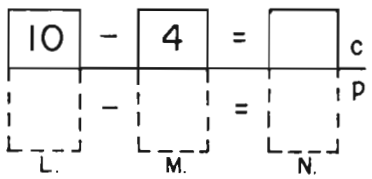
2 six-packs = ____cans
F.

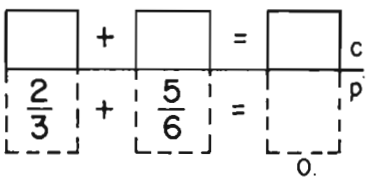


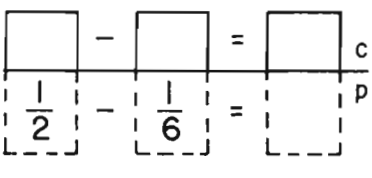


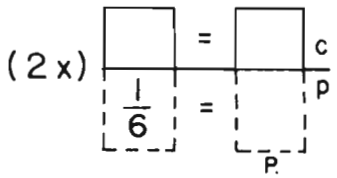


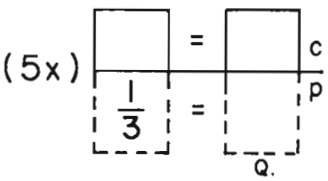


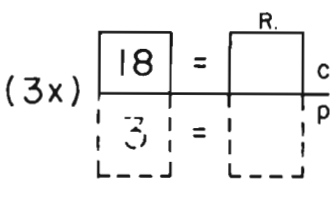


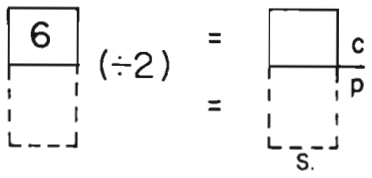


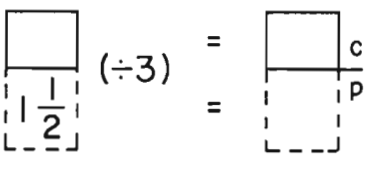


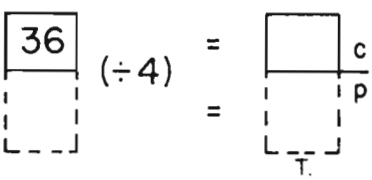




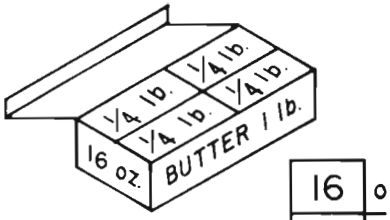




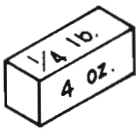




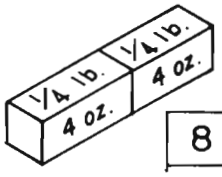
A.	B.	C.	D		E.	F.	G.	H.	I.	J.		K.	L.		M.	N.		O.		P.		Q.		R.	S.	T.		
1/2	2/3	5/6	1	10/6	5	12	18	24	54	1	6/6	1/3	1	10/6	2/3	1	6/6	1	9/6	1/3	2/6	1	10/6	9	1/2	1	9/6



o	16
p	1

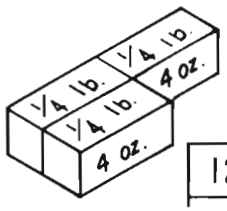


o	4
p	$\frac{1}{4}$



o	8
p	

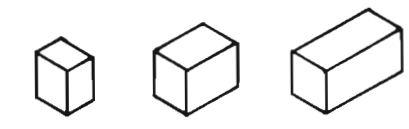
A.



o	12
p	

B.

There are 16 Ounces in 1 Pound.



o	1	2	3
p	$\frac{1}{16}$		

C.

. . . or More DOUBLE-TALK

o	5	6	7	9	10	11	13	14	15
p	$\frac{5}{16}$	$\frac{3}{8}$							

D. E. F. G. H.

6	+	2	=		o
	+		=		p

I. J. K.

	+		=		o
$\frac{1}{4}$	+	$\frac{1}{2}$	=		p

	+		=		o
$\frac{7}{16}$	+	$\frac{9}{16}$	=		p

L.

	−		=		o
$\frac{3}{4}$	−	$\frac{1}{4}$	=		p

M.

	−		=		o
1	−	$\frac{1}{8}$	=		p

N.

	−		=		o
$\frac{1}{2}$	−	$\frac{1}{4}$	=		p

($\frac{1}{2}$ of)	8	=		o
		=		p

O. P.

($\frac{1}{3}$ of)		=		o
	$\frac{9}{16}$	=		p

Q.

($\frac{1}{4}$ of)	8	=		o
		=		p

R. S.

8	(÷2)	=		o
		=		p

T.

9	(÷3)	=		o
		=		p

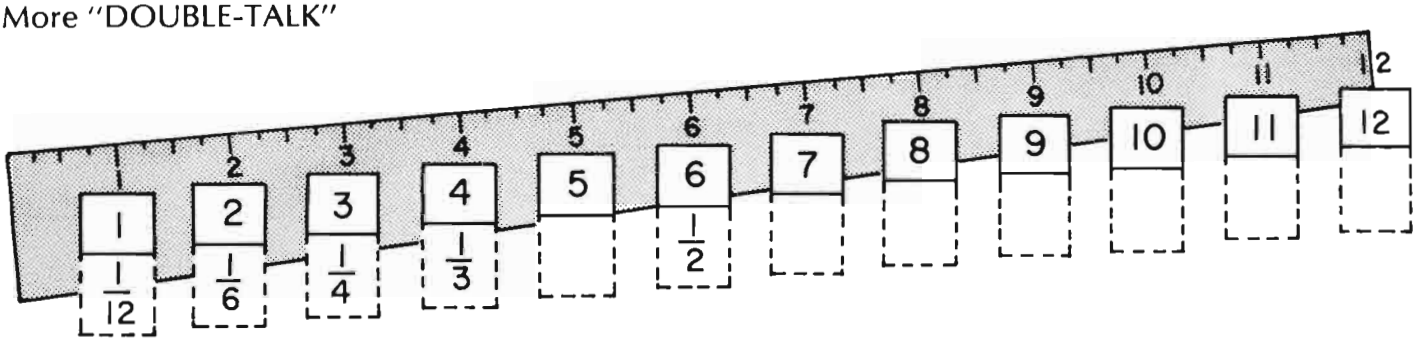
U.

8	(÷4)	=		o
		=		p

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 [12] inches
in [1] foot

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

$\frac{1}{2}$ ft. = ____ in.
$\frac{1}{3}$ ft. = ____ in.
$\frac{2}{3}$ ft. = ____ in.

$\frac{1}{6}$ ft. = ____ in.
$\frac{5}{6}$ ft. = ____ in.
$\frac{1}{12}$ ft. = ____ in.

[ ] + [ ] = [ ] in.
[1/2] + [1/4] = [ ] ft.

[ ] + [ ] = [ ] in.
[1/2] + [1/6] = [ ] ft.

[ ] + [ ] = [ ] in.
[1/6] + [1/3] = [ ] ft.

[ ] − [ ] = [ ] in.
[1/3] − [1/4] = [ ] ft.

[ ] − [ ] = [ ] in.
[3/4] − [1/2] = [ ] ft.

[ ] − [ ] = [ ] in.
[5/6] − [2/3] = [ ] ft.

(2x) [ ] = [ ] in.
[1/4] = [ ] ft.

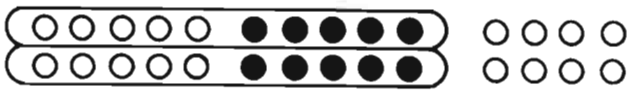
(3x) [ ] = [ ] in.
[1/6] = [ ] ft.

How do you feel ?

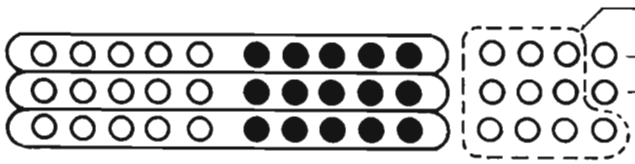
[ ] (÷2) = [ ] in.
[2/3] = [ ] ft.

[ ] (÷3) = [ ] in.
[1/2] = [ ] ft.

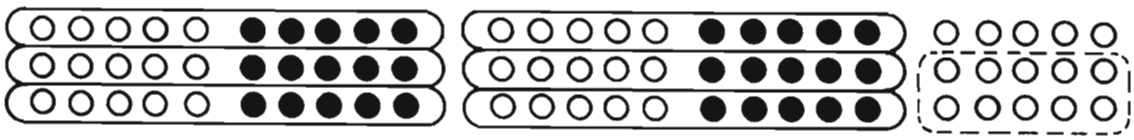
BEANSTICK MULTIPLICATION



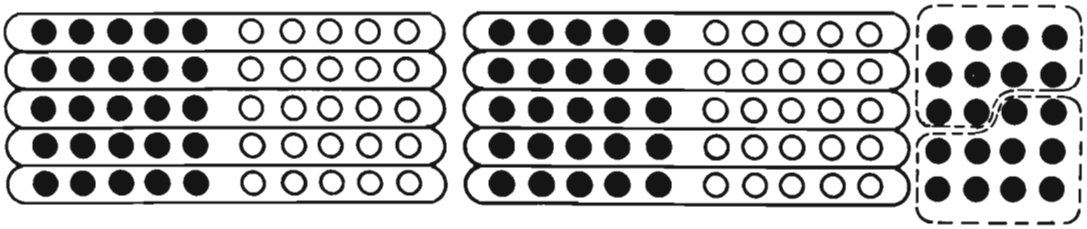
$$\begin{array}{r} 14 \\ \times\ 2 \\ \hline \\ \hline \end{array}$$



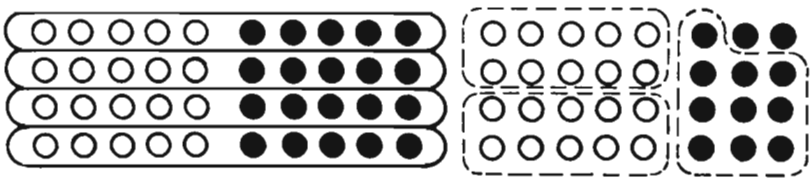
$$\begin{array}{r} 14 \\ \times\ 3 \\ \hline 2 \end{array} \rightarrow \begin{array}{r} 1\,14 \\ \times\ 3 \\ \hline 42 \end{array}$$



$$\begin{array}{r} 25 \\ \times\ 3 \\ \hline 5 \end{array} \rightarrow \begin{array}{r} 1\,25 \\ \times\ 3 \\ \hline 75 \end{array}$$



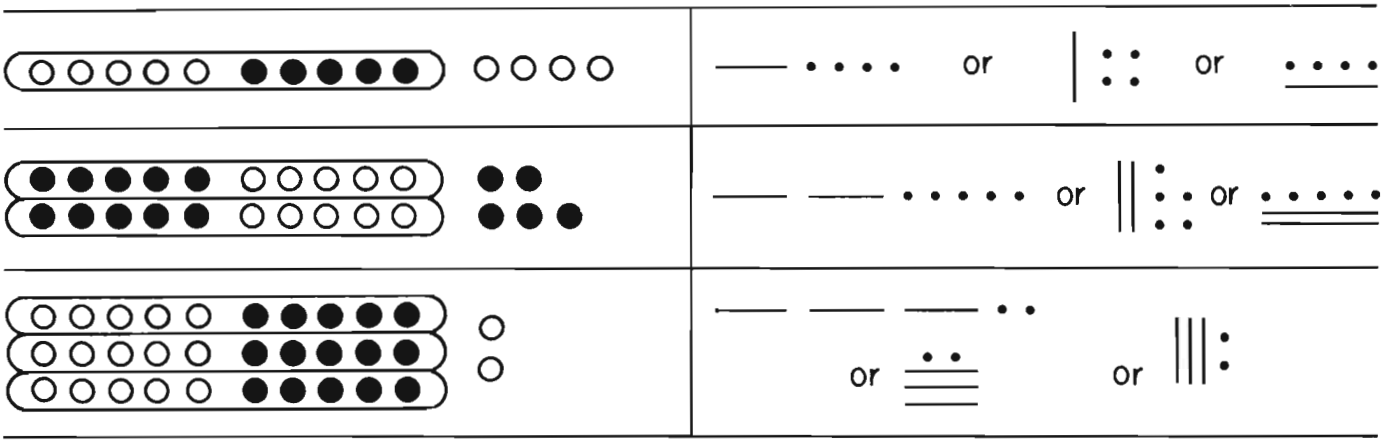
$$\begin{array}{r} 2\,24 \\ \times\ 5 \\ \hline 0 \end{array} \qquad \begin{array}{r} 2\,24 \\ \times\ 5 \\ \hline 120 \end{array}$$



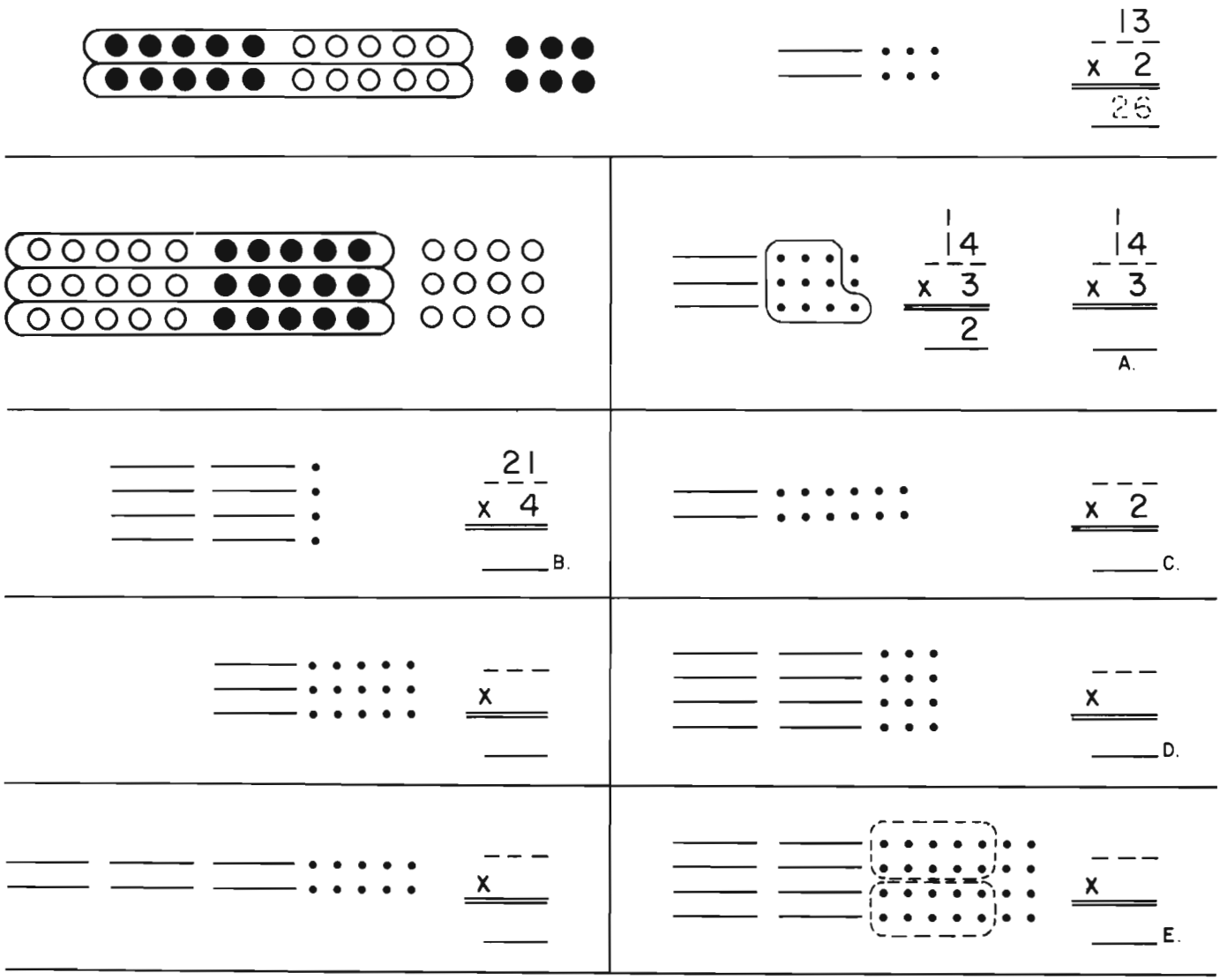
$$\begin{array}{r} 3\,18 \\ \times\ 4 \\ \hline 2 \end{array} \qquad \begin{array}{r} \\ \times\ 4 \\ \hline \\ \hline \end{array}$$

8 (+7) (+7) (+7) (+7) (+7) (+7) (+7) (+7) 64

Beanstick SHORTHAND



Multiplication in Beanstick SHORTHAND



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

BEANSTICK MULTIPLICATION in Shorthand

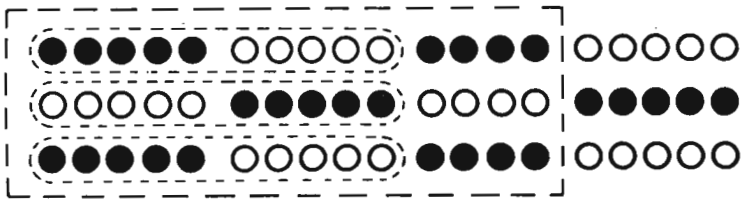
Please draw your own sketches.

12 x 2 ____ A.	21 x 3 ____ B.
14 x 4 ____ C.	12 x 5 ____ D.
17 x 2 ____ E.	19 x 3 ____ F.
23 x 4 ____ G.	16 x 5 ____ H.
18 x 3 ____ I.	15 x 4 ____

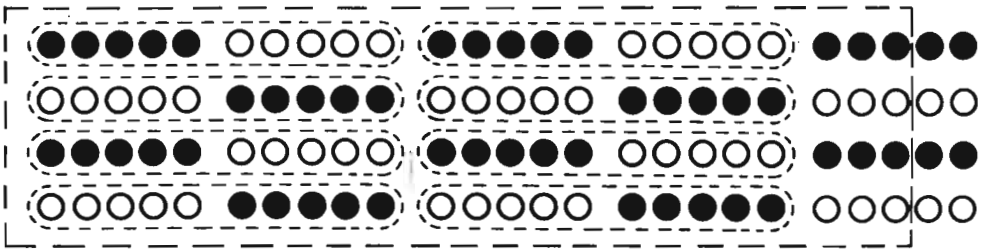
A.	B.	C.	D.	E.	F.	G.	H.	I.
24	54	48	60	24	37	92	80	43
14	63	56	50	34	57	82	70	54

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.

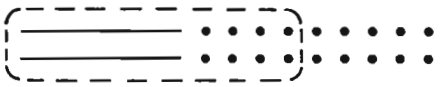


14
3 | 42

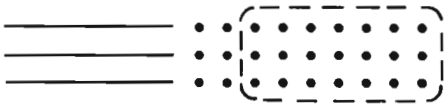


A. 4 | 92

Division in Beanstick SHORTHAND



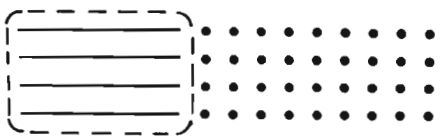
B. 2 | 28



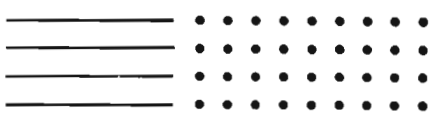
C. 3 | 21

D. 3 | 39

E. 3 | 45



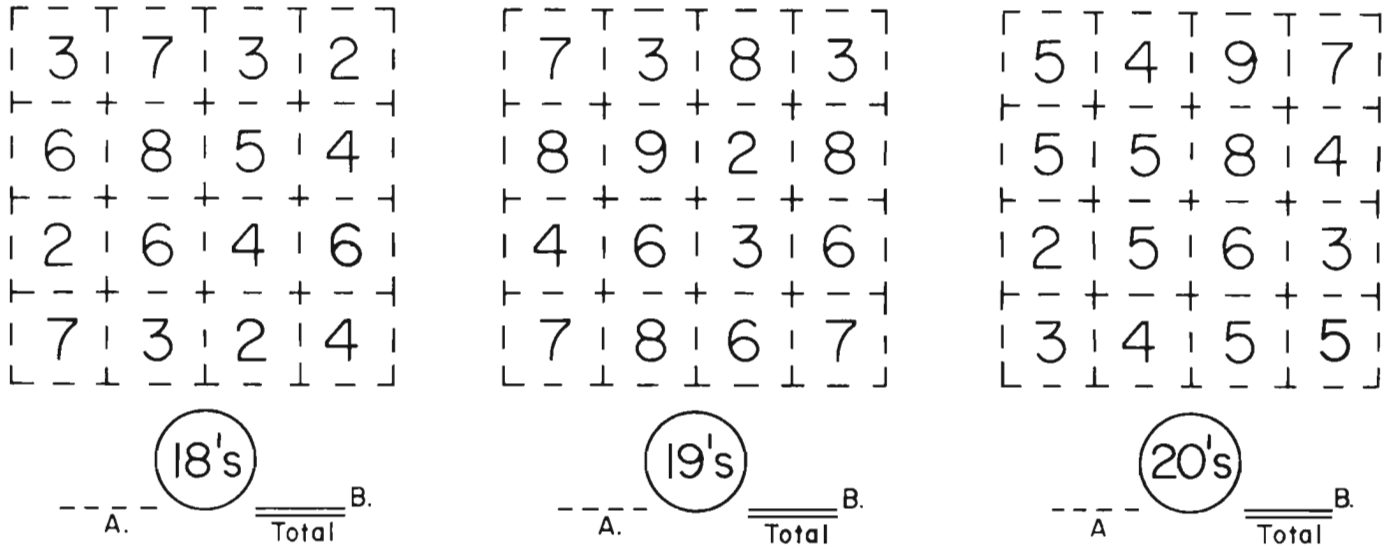
F. 4 | 40



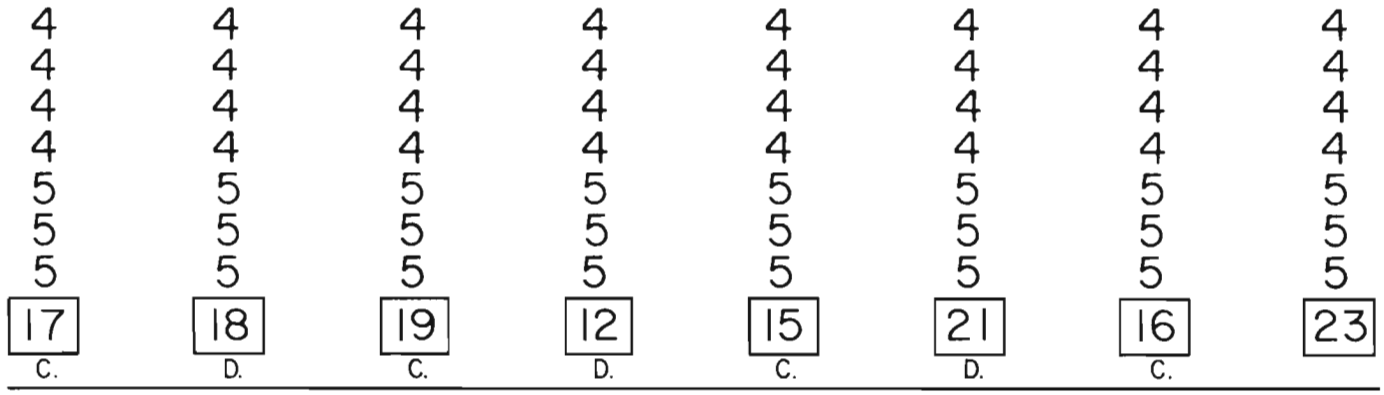
G. 4 | 56

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

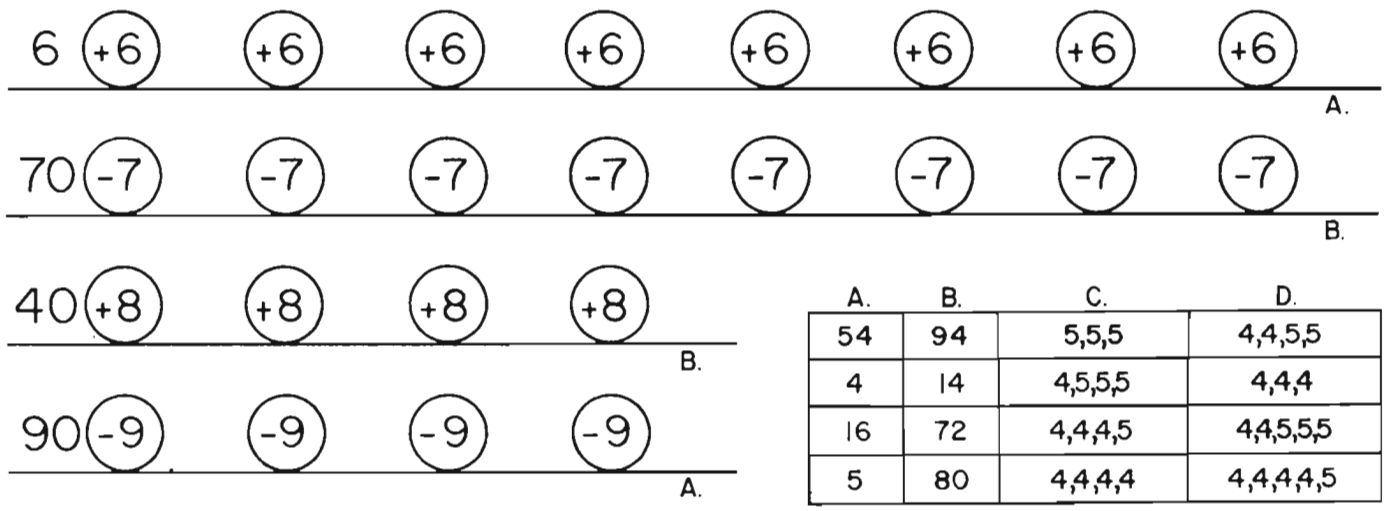
FENCE ARITHMETIC



LOOP ARITHMETIC



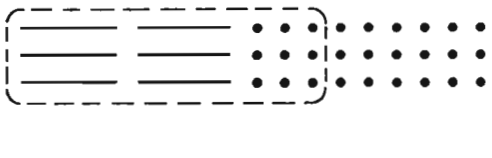
CHAIN REACTIONS



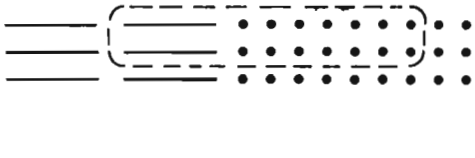
A.	B.	C.	D.
54	94	5,5,5	4,4,5,5
4	14	4,5,5,5	4,4,4
16	72	4,4,4,5	4,4,5,5,5
5	80	4,4,4,4	4,4,4,4,5

MORE BEANSTICK DIVISION in Shorthand

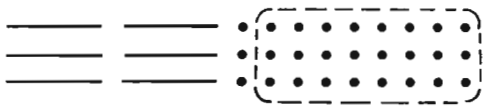
Please describe the arrangements shown.



$3\overline{)69}$ = 23

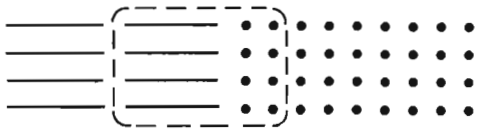


A.

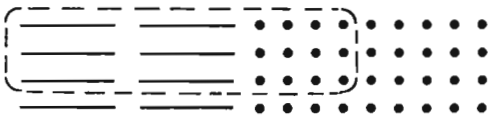


B.

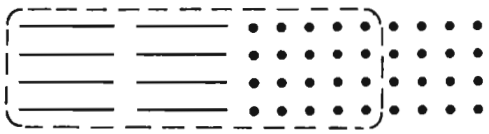
C.



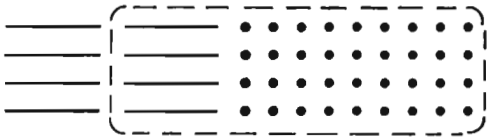
D.



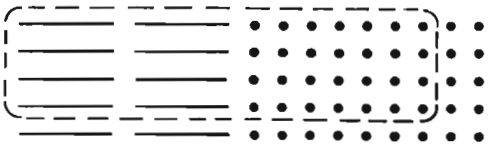
E.



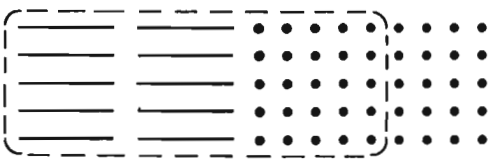
F.



G.



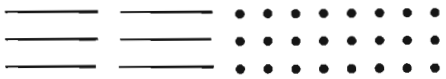
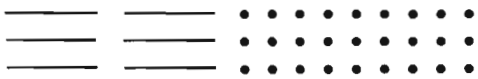
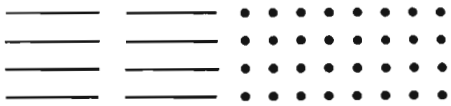
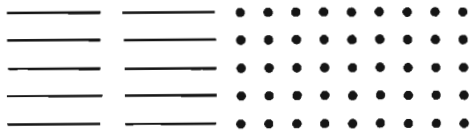
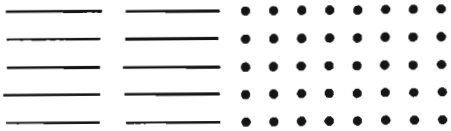
H.



I.

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

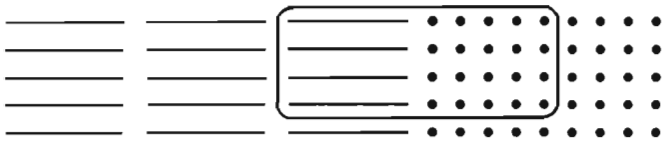
More BEANSTICK DIVISION in Shorthand

Please draw the arrangements indicated.	Then complete the report.
 A. 3 | 39	 B. 3 | 42
 C. 3 | 63	 D. 3 | 51
 E. 4 | 48	 F. 4 | 32
 G. 4 | 56	 H. 4 | 100
 I. 5 | 65	 J. 5 | 110

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

Please complete the report.



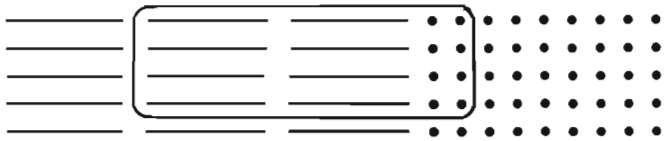
A. $4\overline{)60}$

B. $4\overline{)56}$

C. $4\overline{)60}$

D. $8\overline{)56}$

E. $4\overline{)120}$



F. $4\overline{)\ \ }$

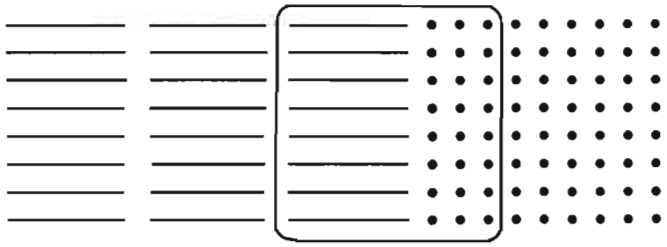
G.

H. $4\overline{)84}$

I. $4\overline{)92}$

J. $4\overline{)44}$

K. $4\overline{)80}$



L. $8\overline{)\ \ }$

M.

N. $8\overline{)112}$

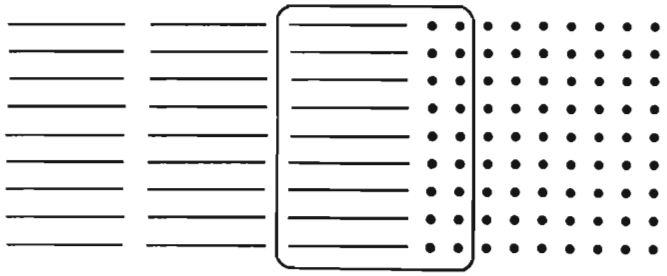
O. $8\overline{)96}$

P. $14\overline{)112}$

Q. $12\overline{)96}$

R. $13\overline{)104}$

S. $4\overline{)104}$



T.

U.

V. $9\overline{)117}$

W. $12\overline{)108}$

X. $13\overline{)117}$

$9\overline{)99}$

$9\overline{)54}$

$6\overline{)54}$

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

Please draw the sketches and complete the report.

A. $2\overline{)70}$

B. $2\overline{)72}$

C. $2\overline{)68}$

D. $35\overline{)70}$

E. $2\overline{)140}$

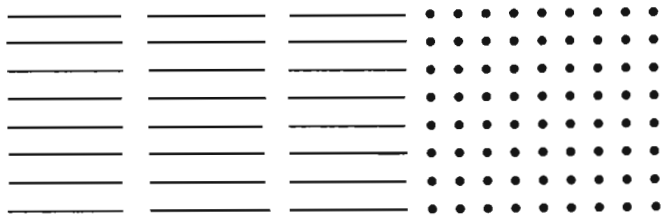
F. $4\overline{)60}$

G. $4\overline{)68}$

H. $4\overline{)52}$

I. $13\overline{)52}$

J. $15\overline{)60}$



K. $5\overline{)130}$

L. $5\overline{)135}$

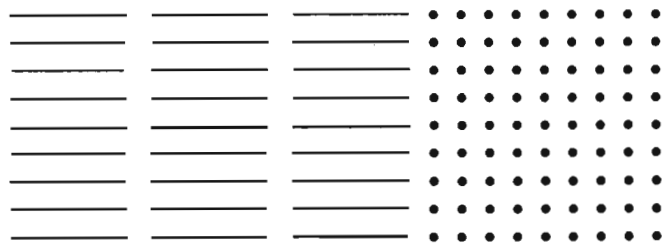
M. $5\overline{)140}$

N. $5\overline{)65}$

O. $13\overline{)65}$

P. $27\overline{)135}$

Q. $26\overline{)130}$



R. $6\overline{)192}$

S. $6\overline{)186}$

V. $6\overline{)198}$

T. $6\overline{)180}$

U. $6\overline{)90}$

U. $12\overline{)180}$

V. $33\overline{)198}$

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

Please draw the sketches and complete the report.

A. $5\overline{)80}$

B. $10\overline{)80}$

C. $5\overline{)85}$

D. $5\overline{)75}$

E. $5\overline{)160}$

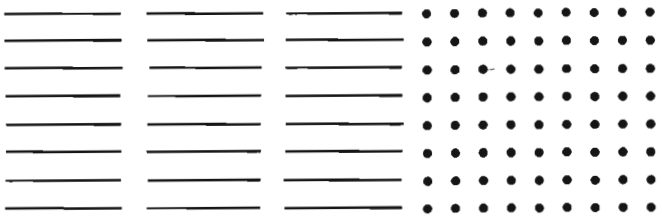
F. $3\overline{)87}$

G. $3\overline{)90}$

H. $6\overline{)90}$

I. $29\overline{)87}$

J. $15\overline{)90}$



K. $8\overline{)176}$

L. $8\overline{)184}$

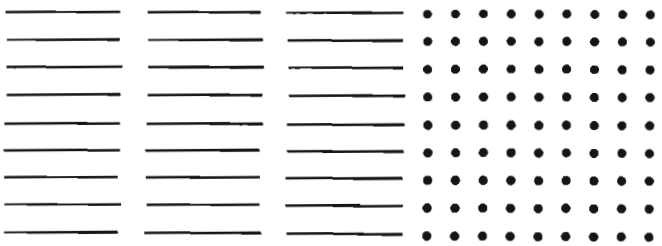
M. $8\overline{)168}$

N. $8\overline{)160}$

O. $8\overline{)152}$

P. $16\overline{)160}$

Q. $19\overline{)152}$



R. $9\overline{)126}$

S. $9\overline{)135}$

T. $9\overline{)117}$

U. $9\overline{)108}$

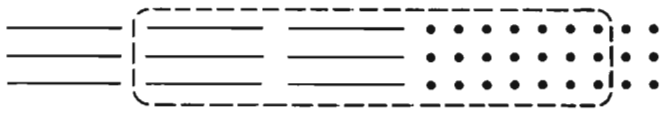
V. $9\overline{)99}$

$12\overline{)120}$

$12\overline{)132}$

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

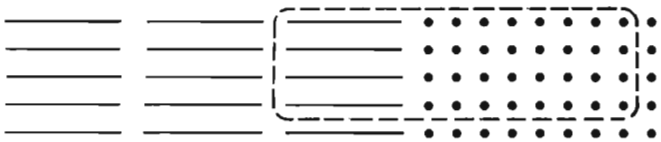
BEANSTICK MULTIPLICATION and DIVISION . . . and Related Examples



$3\overline{)\,27}$

$3\overline{)\,87}$ $\quad 3\overline{)\,78}$

$4\overline{)\,27}$ $\quad 27\overline{)\,81}$

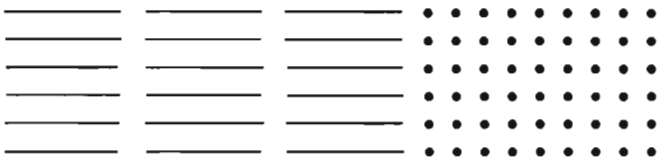


$4\overline{)\,72}$

$4\overline{)\,76}$ $\quad 4\overline{)\,68}$

$2\overline{)\,72}$ $\quad 8\overline{)\,72}$

Please draw your own sketches.



$6\overline{)\,24}$

$6\overline{)\,150}$ $\quad 3\overline{)\,150}$

$6\overline{)\,72}$ $\quad 6\overline{)\,13}$

$6\overline{)\,180}$ $\quad 6\overline{)\,192}$

$6\overline{)\,210}$

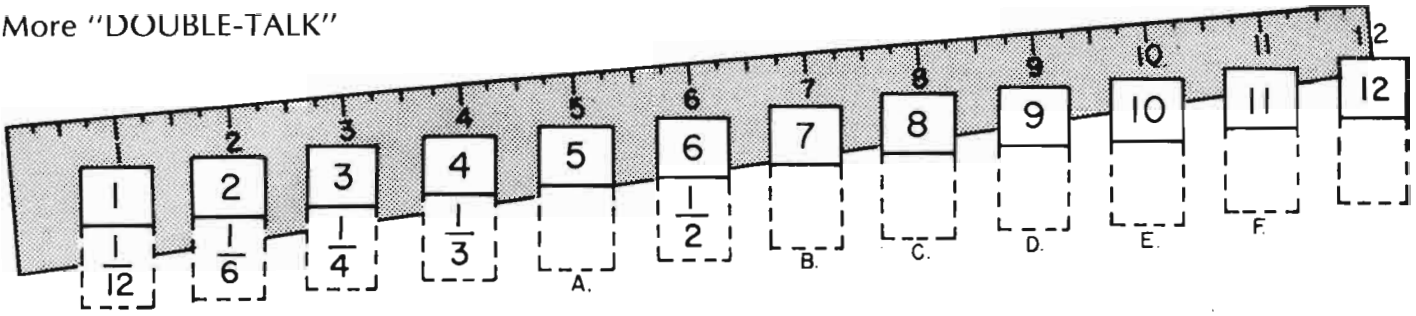
$6\overline{)\,204}$ $\quad 6\overline{)\,36}$

$3\overline{)\,204}$ $\quad 6\overline{)\,108}$

$3\overline{)\,34}$ $\quad 6\overline{)\,432}$

How do you feel ?

More "DOUBLE-TALK"



There are 12 inches in 1 foot

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

36			H.
3	4	5	6

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

$\frac{1}{2}$ foot = ____ inches

$1\frac{1}{4}$ foot = ____ inches K.

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

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

$2\frac{1}{2}$ feet = ____ inches

3 feet = ____ inches I.

$\frac{2}{3}$ foot = ____ inches J.

$\frac{1}{12}$ foot = ____ inch

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

12	+	24	=	
	+		=	M.

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

	−		=	
2	−	$\frac{1}{2}$	=	O.

	−		=	
3	−	$1\frac{1}{2}$	=	P.

	−		=	
1	−	$\frac{2}{3}$	=	Q.

(3x)		=	
	$\frac{1}{2}$	=	R.

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

(5x)		=	
	$\frac{1}{4}$	=	T.

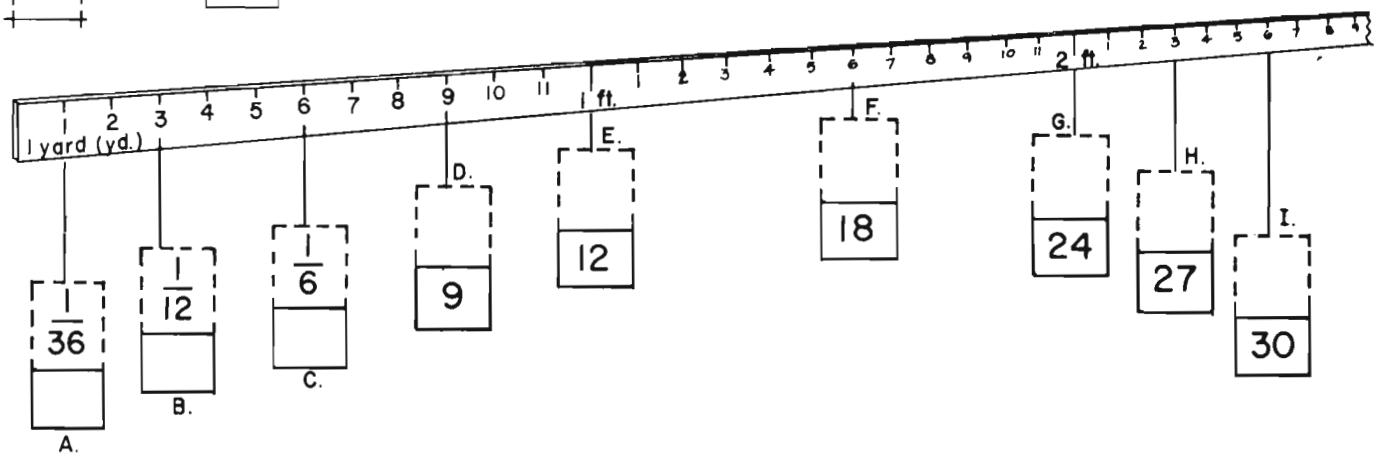
	(÷3)	=	
1		=	U.

	(÷3)	=	
2		=	$\frac{2}{3}$ V.

	(÷2)	=	
$\frac{1}{2}$		=	

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	$1\frac{1}{2}$	$\frac{3}{4}$	$\frac{1}{2}$	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



J. 1/18 | K. 1/9 | 2/9 | 4/9 | 5/9 | 7/9 | 8/9 | L. 5/12 | 7/12 | 11/12 | M. 5/36 | 7/36 | 11/36 | 13/36

N. 3/4 − 1/2 =

2/3 − 1/3 =

O. 1 − 1/9 =

2/9 + 5/9 =

P. 7/36 + 11/36 =

2/3 + 1/6 =

Q. 1/6 − 1/12 =

R. 1/6 + 1/4 =

1/18 − 1/36 =

S. 1/2 (÷2) =

8/9 (÷2) =

T.

U. 1/9 (÷2) =

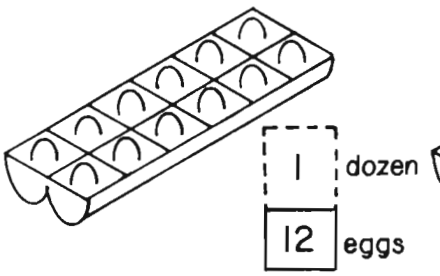
V. (1/2 of) 1/3 =

(1/2 of) 2/3 =

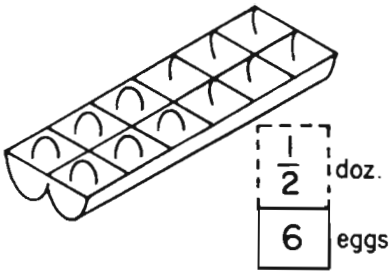
W.

(1/2 of) 1/2 =

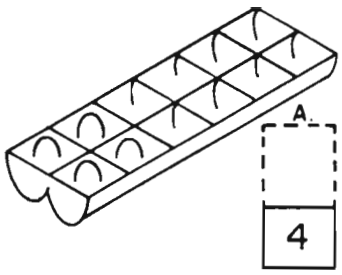
A.	B.	C.	D.	E.	F.	G.	H.	I.	J.	K.	L.	M.	N.	O.	P.	Q.	R.	S.	T.	U.	V.	W.
1	4	5	1/3	1/4	1/2	2/4	3/5	5/6	9	4	15	6	1/4	8	1/2	2/24	5/12	1/4	10/9	2/9	1/6	1/3
2	3	6	1/4	1/3	18	2/3	3/4	2/15	2	2	10	5	2/8	8/9	18/16	1/12	2/16	2/2	4/9	1/18	2/3	2/6



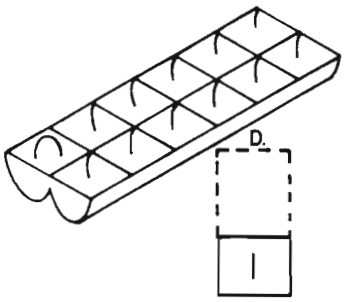
1 dozen = 12 eggs



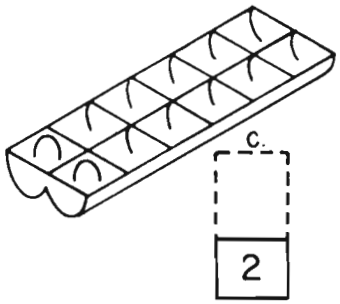
$\frac{1}{2}$ doz. = 6 eggs



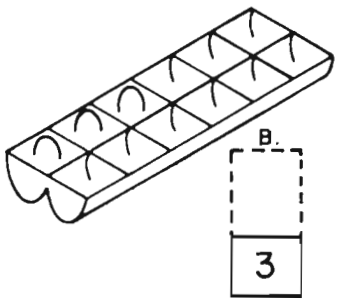
A. = 4



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.	
		E.	F.	G.	H.	13	14	15	16	17	18	19	20

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

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

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

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

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

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

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

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

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

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

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

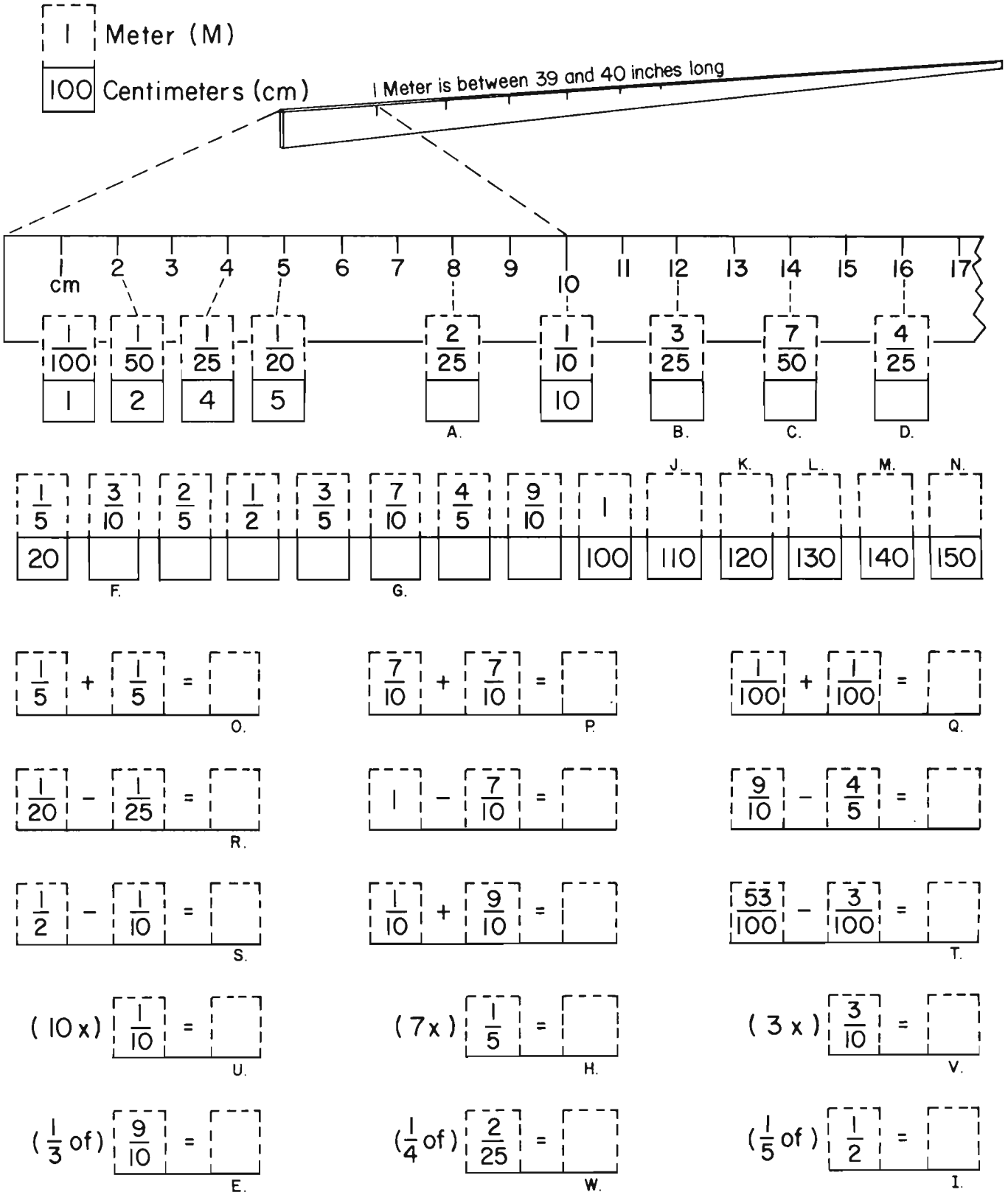
$(4x)\ \frac{1}{12} =$ ____

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

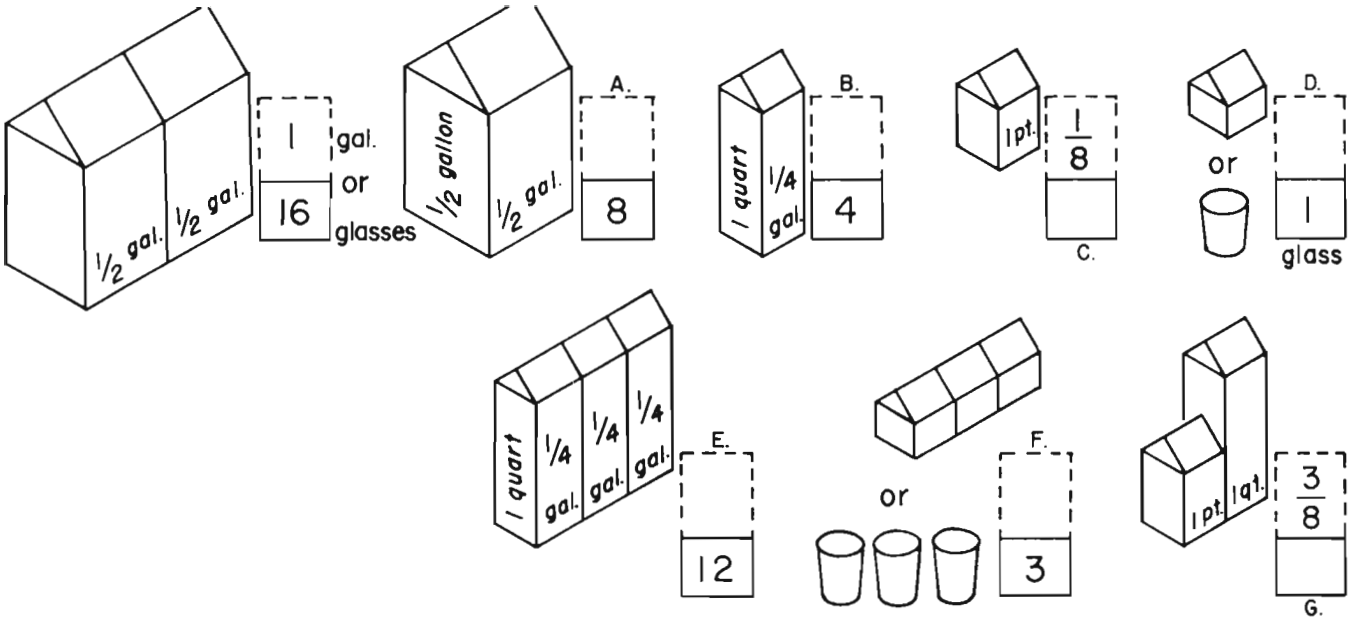
U. $1\frac{1}{3} (\div 8) =$ ____

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

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	$1\frac{1}{12}$	$1\frac{5}{12}$	$1\frac{11}{12}$	$1\frac{1}{2}$	1	$\frac{1}{3}$	$\frac{4}{6}$	$\frac{12}{12}$	$\frac{1}{2}$	$\frac{1}{6}$	$1\frac{1}{2}$	$\frac{1}{8}$	$\frac{1}{5}$
$\frac{1}{3}$	$\frac{1}{2}$	$\frac{1}{6}$	$\frac{1}{12}$	10	7	10	11	$1\frac{6}{12}$	$1\frac{7}{12}$	$1\frac{7}{12}$	$1\frac{1}{4}$	$\frac{12}{12}$	$\frac{5}{6}$	$\frac{2}{3}$	1	$\frac{6}{12}$	$\frac{2}{12}$	$\frac{3}{2}$	$\frac{1}{12}$	$\frac{1}{6}$



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	$\frac{7}{5}$	$\frac{1}{10}$	$\frac{1}{10}$	$1\frac{2}{10}$	$1\frac{3}{10}$	$1\frac{4}{10}$	$1\frac{5}{10}$	$\frac{2}{5}$	$\frac{14}{10}$	$\frac{2}{100}$	$\frac{1}{5}$	$\frac{2}{5}$	$\frac{1}{2}$	$\frac{10}{10}$	$\frac{9}{10}$	$\frac{2}{100}$



5/16	7/16	9/16	11/16	13/16	15/16	3/8	5/8	7/8	1 1/8	N.			
									18	20	22	24	26
H.	I.					J.			M.				

$\square + \frac{3}{4} = \square$ O.

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

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

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

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

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

$(2x)\ \frac{3}{8} = \square$ T.

$(4x)\ \frac{1}{8} = \square$ L.

$(5x)\ \frac{3}{16} = \square$ 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.
1/8	4/8	2	1/8	3/4	1/2	4	5	7	5	1/8	4/8	18	2/4	7/4	1/2	1/2	13/8	11/16	3/4	15/16	5/16	3/8
1/2	1/4	8	1/16	1/3	3/16	6	8	9	6	2/4	1/2	10	1 1/4	1 3/4	8/16	4/8	1 5/8	4/8	6/8	8/16	3/16	9/8

Please complete the tables.

There are 12 inches in 1 foot

ft.	1	$\frac{1}{2}$	$\frac{1}{3}$	$\frac{2}{3}$	$\frac{1}{4}$	$\frac{3}{4}$	$\frac{1}{6}$	$\frac{5}{6}$	$\frac{1}{12}$	$\frac{5}{12}$	$\frac{7}{12}$	$\frac{11}{12}$	$1\frac{1}{2}$	$1\frac{1}{3}$
in.	12													

There are 60 minutes in 1 hour.

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

There are 100 cents in 1 dollar.

$	1	$\frac{1}{2}$	$\frac{1}{4}$	$\frac{3}{4}$	$\frac{1}{5}$	$\frac{2}{5}$	$\frac{3}{5}$	$\frac{4}{5}$	$\frac{1}{10}$	$\frac{3}{10}$	$\frac{7}{10}$	$\frac{9}{10}$	$\frac{1}{20}$	$\frac{1}{25}$
¢	100													

$\frac{1}{3} + \frac{1}{6} =$ ☐ $\quad \frac{3}{4} + \frac{3}{4} =$ ☐ $\quad \frac{1}{6} + \frac{5}{6} =$ ☐

$\frac{3}{4} - \frac{1}{4} =$ ☐ $\quad \frac{1}{2} - \frac{1}{5} =$ ☐ $\quad \frac{2}{3} - \frac{1}{2} =$ ☐

$\frac{2}{3} + \frac{2}{3} =$ ☐ $\quad \frac{3}{4} - \frac{1}{6} =$ ☐ $\quad \frac{7}{10} + \frac{1}{10} =$ ☐

$(5\times)\ \frac{1}{10} =$ ☐ $\quad (2\times)\ \frac{3}{4} =$ ☐

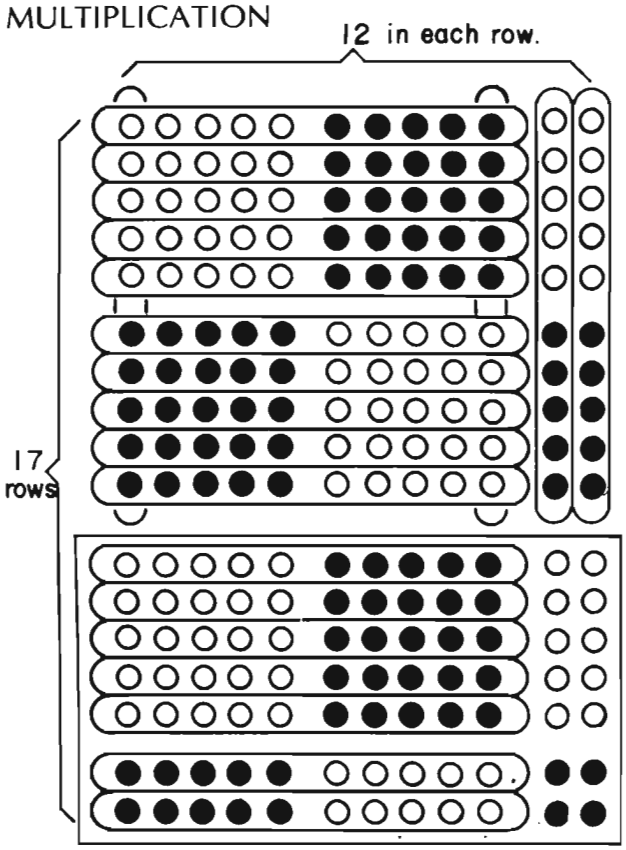
$\frac{2}{5}\ (\div 2) =$ ☐ $\quad \frac{5}{6}\ (\div 2) =$ ☐

How do you feel ?

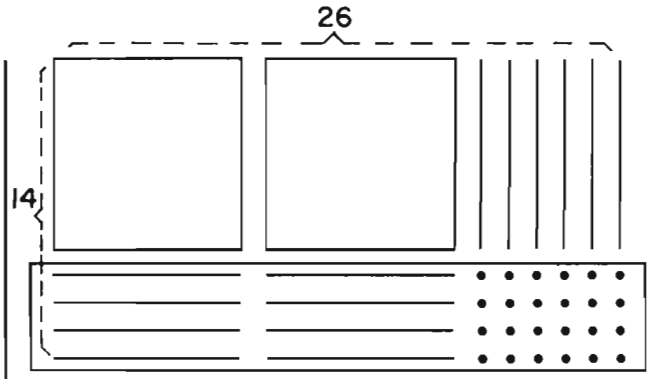
Rafts of 100 Pennies . . . Sticks with 10 Pennies . . . and Loose Pennies . . . all arranged neatly in Rows and Columns.

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

MULTIPLICATION



How many pennies?



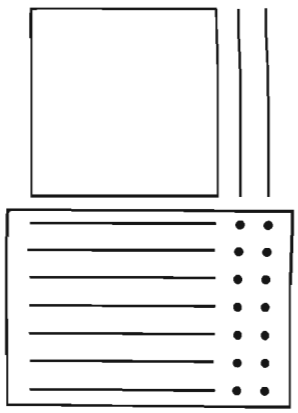
26 in a row
x 14 rows also
C. ____ in box
D. ____ out of box
E. ____ Total

14
x 26
____ F.

26
14 ____ G.

14
26 ____ H.

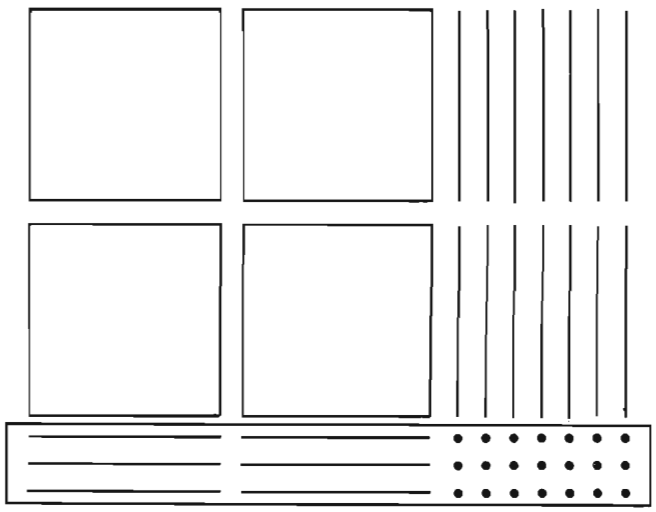
A shorthand sketch -



12 in a row
x 17 rows
84 in box
120 out of box
____ Total
A.

and

12
17 ____ B.



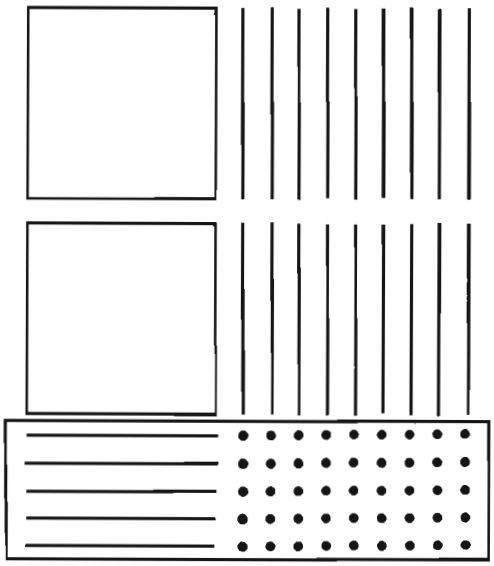
27 in a row
x 23 rows -→ also-→
I. ____ in box
J. ____ out of box
K. ____ Total

23
x 27
____ L.

27
23 ____

23
27 ____

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



19 in a row
x25 rows

A. ____ in box

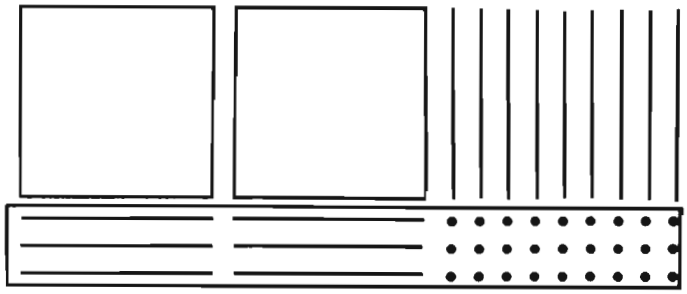
B. ____ out of box

C. ____ Total

25
x 19
____

19
25 ____

25
19 ____



29 in a row
x13 rows

D. ____ in box

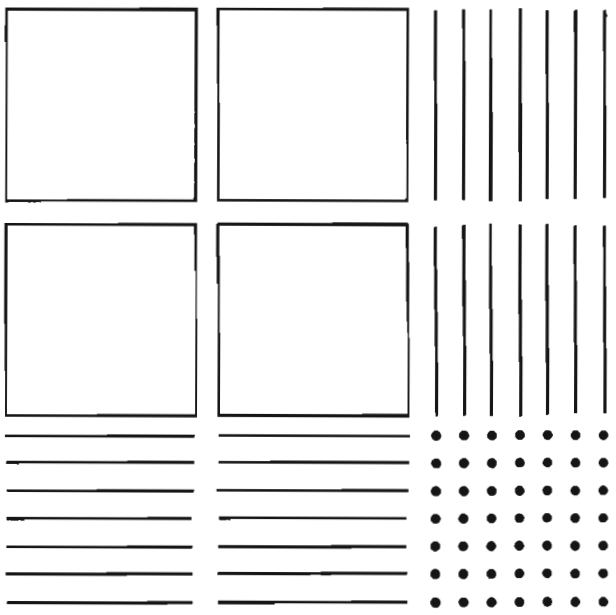
E. ____ out of box

F. ____ Total

13
x 29
____

29
13 ____

13
29 ____



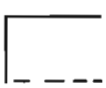
x27

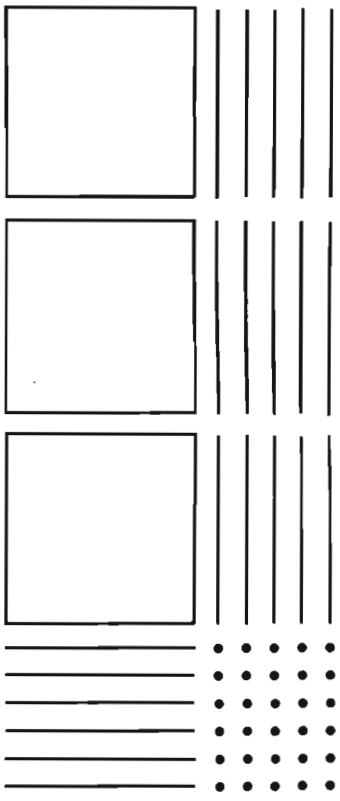
____

____

G. ____

and





15
x36
____

____

____H.

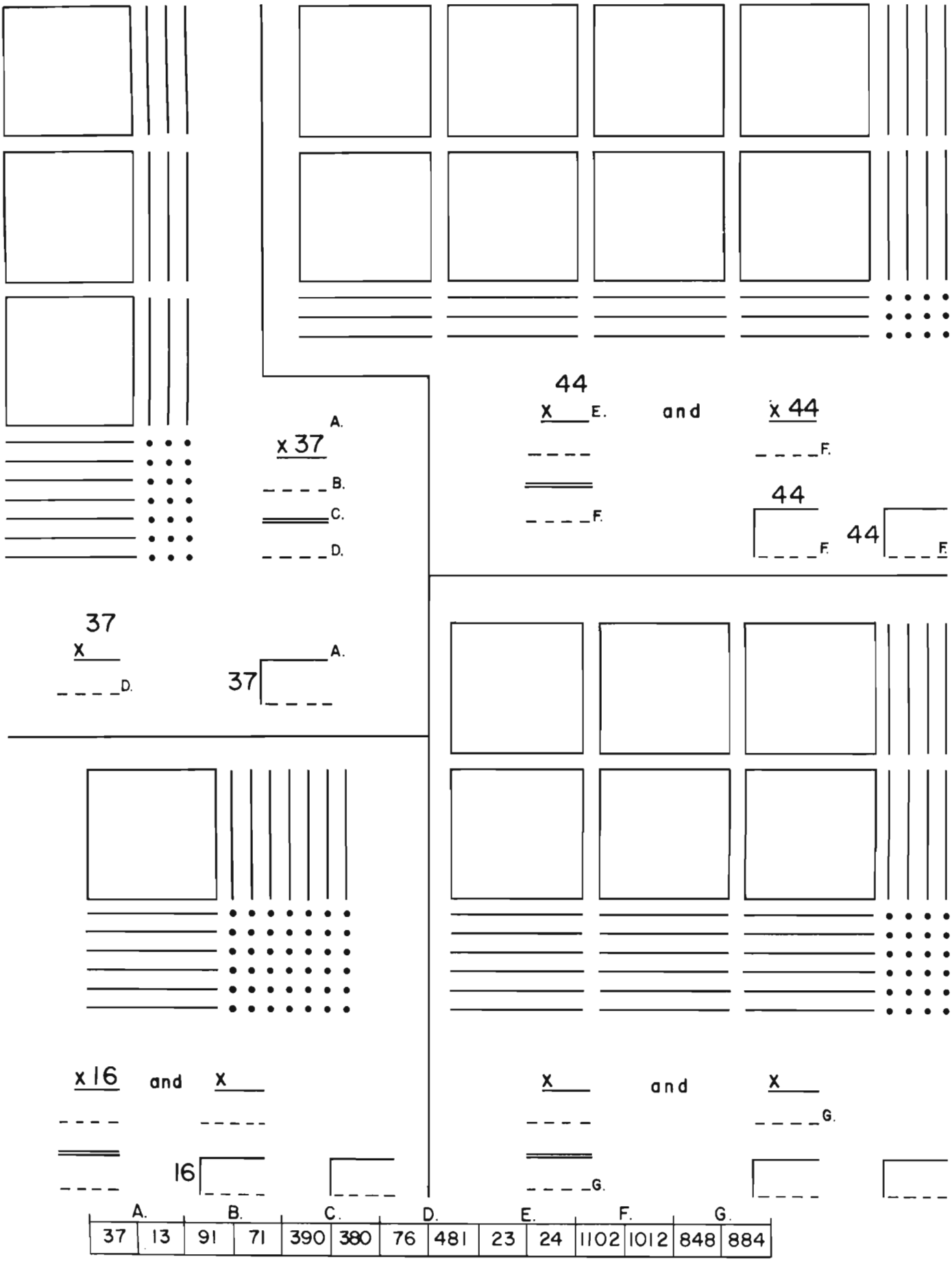
and

36
x15
____

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



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

0 x 6 = 0	1 x 6 = 6	2 x 6 = 12	3 x 6	4 x 6	5 x 6	6 x 6	7 x 6	8 x 6	9 x 6

0 x 6 = 0	10 x 6 = 60	20 x 6	30 x 6	40 x 6	50 x 6	60 x 6	70 x 6	80 x 6	90 x 6

30 + 2 = 32

30 x 6 = 180	2 x 6 = 12	32 x 6 = 192

180 + 12 = 192

40 x 6	8 x 6	x 6

A.

10 x 6	9 x 6	x 6

B.

90 x 6	6 x 6	x 6

C.

80 x 6	3 x 6	x 6

70 x 6	5 x 6	x 6

60 x 6	x 6	64 x 6

C.

x 6	x 6	29 x 6

B.

x 6	x 6	57 x 6

A.

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

40 = 6 x 6 + 4 D.

50 = 8 x ___ + ___ H.

25 = 4 x 7 − 3 (note ↓)

50 = 9 x ___ + ___ E.

40 = 5 x ___ + ___ I.

60 = 7 x ___ − ___ F.

25 = 3 x ___ + ___

75 = 9 x ___ + ___ D.

49 = 6 x ___ − ___ G.

60 = 8 x ___ + ___ F.

33 = 5 x ___ + ___

53 = 7 x ___ − ___ H.

30 = 4 x ___ + ___

31 = 3 x ___ + ___

17 = 2 x ___ − ___

70 = 8 x ___ + ___ G.

87 = 9 x ___ + ___ E.

45 = 7 x ___ − ___ I.

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

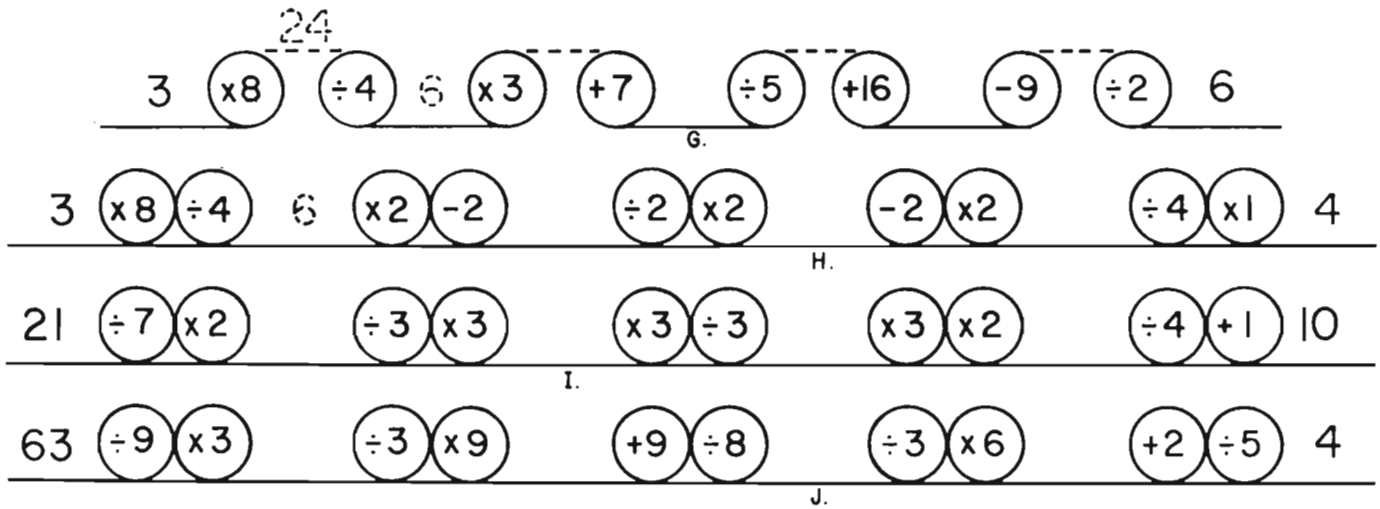
G.	D.	H.	E.	I.	F.
9,5	8,3	6,2	5,5	7,4	7,4
8,6	6,4	8,3	9,6	7,5	9,3

BUILDING and USING TABLES

0 x 9	1 x 9	2 x 9	3 x 9	4 x 9	5 x 9	6 x 9	7 x 9	8 x 9	9 x 9
0 x 9	10 x 9	20 x 9	30 x 8	40 x 9	50 x 9	60 x 9	70 x 9	80 x 9	90 x 9

x 9	x 9	32 x 9	x 9	x 9	18 x 9	x 9	x 9	25 x 9
		A.			B.			
x 9	x 9	89 x 9	x 9	x 9	54 x 9	x 9	x 9	73 x 9
		C.			D.			E.
x 9	x 9	46 x 9	x 9	x 9	91 x 9	x 9	x 9	67 x 9
								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

0 x 7	1 x 7	2 x 7	3 x 7	4 x 7	5 x 7	6 x 7	7 x 7	8 x 7	9 x 7

0 x 7	10 x 7	20 x 7	30 x 7	40 x 7	50 x 7	60 x 7	70 x 7	80 x 7	90 x 7

x 7	x 7	36 x 7	x 7	x 7	74 x 7	x 7	x 7	65 x 7
		A.			B.			

x 7	x 7	48 x 7	x 7	x 7	59 x 7	x 7	x 7	87 x 7
		C.						A.

x 7	x 7	97 x 7	x 7	x 7	68 x 7	x 7	x 7	95 x 7
		B.						C.

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

35 = 4 x ___ + ___ D.	40 = 6 x ___ + ____	70 = 8 x ___ (note ↓) − ____
37 = 5 x ___ + ___ E.	75 = 9 x ___ + ____ I.	53 = 7 x ___ − ____ F.
52 = 8 x ___ + ___ F.	39 = 5 x ___ + ____	33 = 4 x ___ − ____
59 = 6 x ___ + ___ G.	70 = 8 x ___ + ____ D.	51 = 8 x ___ − ____ G.
44 = 8 x ___ + ____	47 = 5 x ___ + ____	75 = 9 x ___ − ____ H.
66 = 9 x ___ + ___ H.	53 = 6 x ___ + ___ E.	50 = 7 x ___ − ___ 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

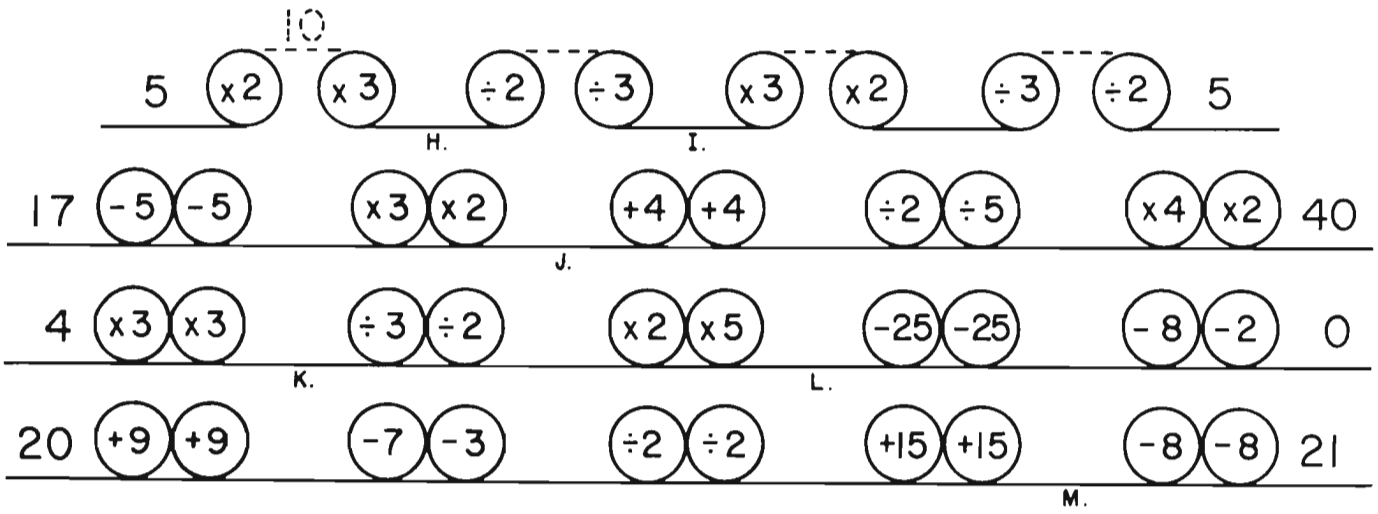
BUILDING and USING TABLES

14 x 0 = 0	14 x 1 = 14	14 x 2 = 28	14 x 3 =	14 x 4 =	14 x 5 =	14 x 6 =	14 x 7 =	14 x 8 =	14 x 9 =

14 x 0 = 0	14 x 10 = 140	14 x 20 =	14 x 30 =	14 x 40 =	14 x 50 =	14 x 60 =	14 x 70 =	14 x 80 =	14 x 90 =

14 x 28 = 112 + 280 = 392 A.	14 x 57 = B.	14 x 43 = C.	14 x 58 =	14 x 74 = D.
14 x 63 = E.	14 x 59 =	14 x 86 = F.	14 x 91 =	14 x 67 = G.

CHAIN REACTIONS



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

29 x 0	29 x 1	29 x 2	29 x 3	29 x 4	29 x 5	29 x 6	29 x 7	29 x 8	29 x 9

29 x 0	29 x 10	29 x 20	29 x 30	29 x 40	29 x 50	29 x 60	29 x 70	29 x 80	29 x 90

29 x 29 ------ ____ A.	29 x 92 ------ ____ B.	29 x 83 ------ ____ C.	29 x 38 ------ ____ A.	29 x 55 ------ ____
29 x 46 ------ ____ B.	29 x 64 ------ ____	29 x 17 ------ ____	29 x 71 ------ ____ C.	29 x 88 ------ ____

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

40 = 7 x ____ + ____ D.

46 = 5 x ____ + ____

50 = 7 x ____ (note ↓) ____ F.

40 = 6 x ____ + ____ E.

65 = 9 x ____ + ____ I.

40 = 6 x ____ − ____ G.

50 = 7 x ____ + ____ F.

65 = 8 x ____ + ____ D.

60 = 8 x ____ − ____

50 = 8 x ____ + ____ G.

38 = 5 x ____ + ____

60 = 7 x ____ − ____ H.

47 = 7 x ____ + ____ H.

85 = 9 x ____ + ____ E.

45 = 6 x ____ − ____ I.

60 = 8 x ____ + ____

85 = 10 x ____ + ____

99 = 10 x ____ − ____

or

A.	B.	C.
841	1334	2407
1102	2668	2059

or

G.	D.	H.	E.	I.	F.
7,2	5,5	6,5	9,4	7,2	8,6
6,2	8,1	9,3	6,4	8,3	7,1

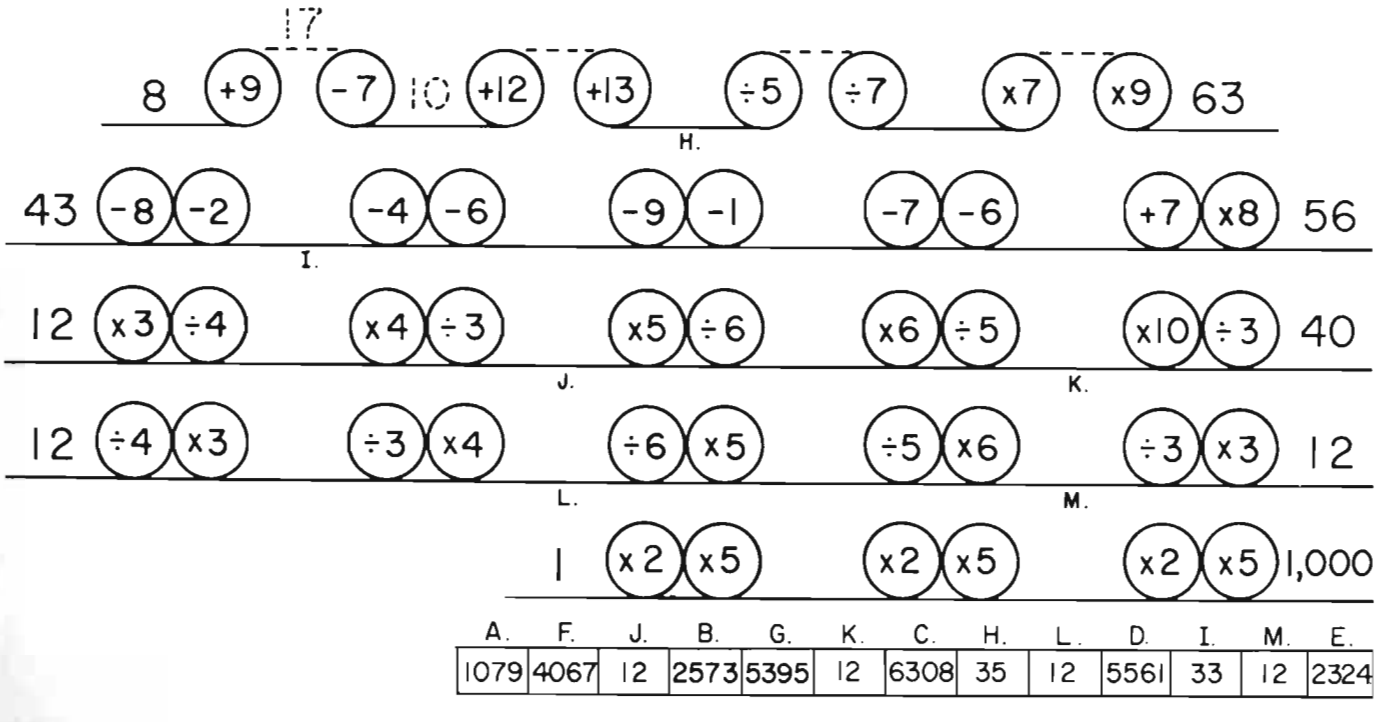
BUILDING and USING TABLES

83 x 0	83 x 1	83 x 2	83 x 3	83 x 4	83 x 5	83 x 6	83 x 7	83 x 8	83 x 9

83 x 0	83 x10	83 x20	83 x30	83 x40	83 x50	83 x60	83 x70	83 x80	83 x90

83 x 13 ------ A.	83 x 31 ------ B.	83 x 76 ------ C.	83 x 67 ------ D.	83 x 55 ------
83 x 28 ----- E.	83 x 82 -----	83 x 49 ----- F.	83 x 94 -----	83 x 65 ----- G.

CHAIN REACTIONS



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

23 x 0	23 x 1	23 x 2	23 x 3	23 x 4	23 x 5	23 x 6	23 x 7	23 x 8	23 x 9
23 x 0	23 x10	23 x20	23 x30	23 x40	23 x50	23 x60	23 x70	23 x80	23 x90

x 43 ------ _____	x 28 ------ _____	x 58 ------ _____	x 86 ------ _____	x 74 ------ _____
x 91 ------ _____	x 67 ------ _____	x 99 ------ _____	x 65 ------ _____	x 59 ------ _____

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

35 = 4 x ____ + ____ 78 = 8 x ____ + ____ 67 = 9 x ____ + ____

35 = 6 x ____ + ____ 31 = 7 x ____ + ____ 39 = 4 x ____ + ____

51 = 7 x ____ + ____ 84 = 9 x ____ + ____ 75 = 9 x ____ + ____

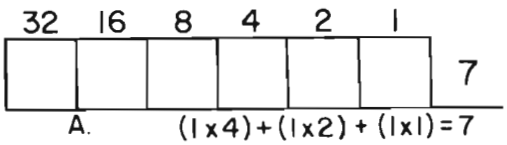
57 = 9 x ____ + ____ 38 = 5 x ____ + ____ 43 = 5 x ____ + ____

27 = 4 x ____ + ____ 40 = 6 x ____ + ____ 60 = 8 x ____ + ____

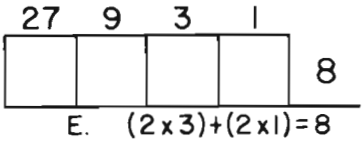
67 = 8 x ____ + ____ 48 = 5 x ____ + ____ 59 = 6 x ____ + ____

"Check List Addition"

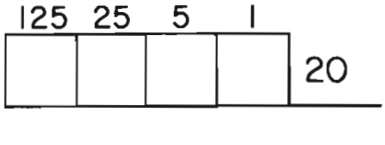
Please use the smallest whole numbers possible in the boxes.

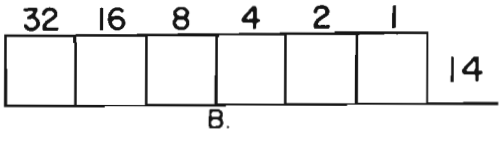


A. (1x4)+(1x2)+(1x1)=7

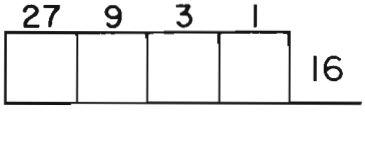


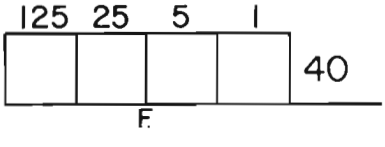
E. (2x3)+(2x1)=8



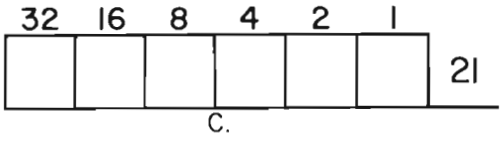


B.

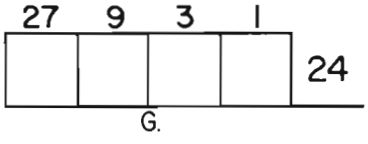




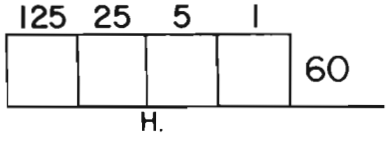
F.



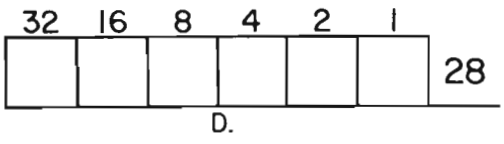
C.



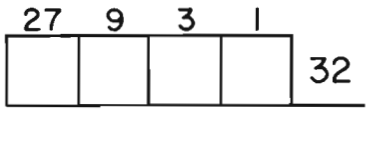
G.

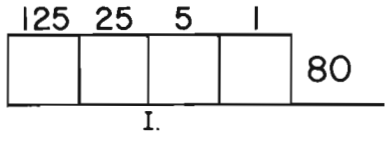


H.

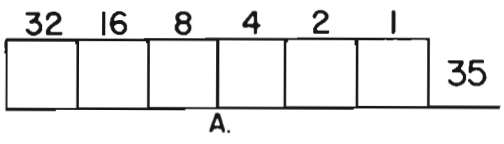


D.

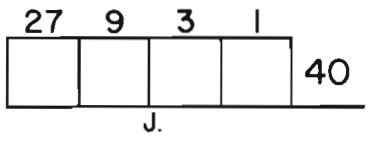




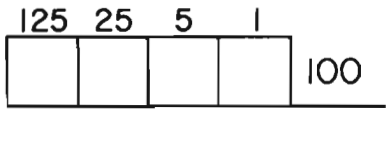
I.

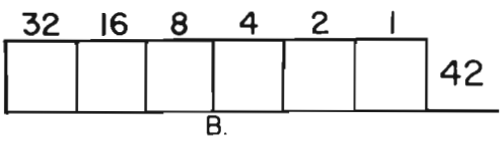


A.

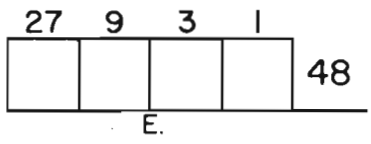


J.

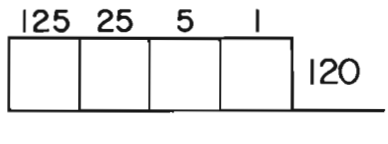


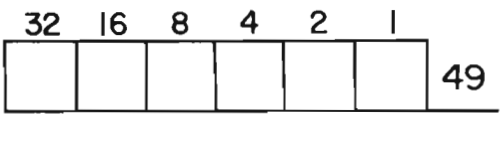


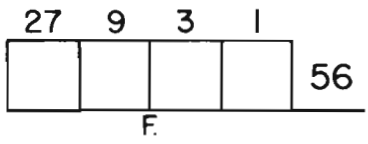
B.



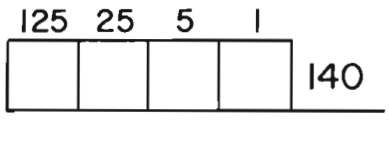
E.

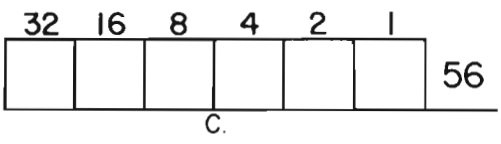




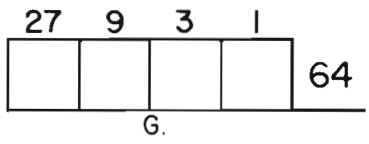


F.

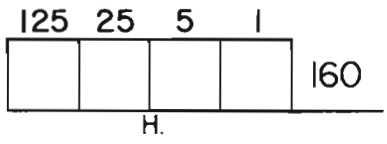




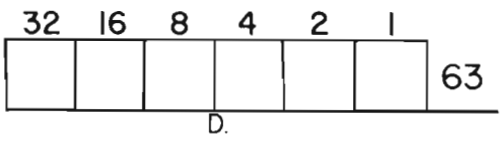
C.



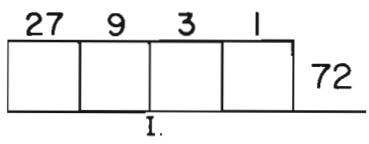
G.



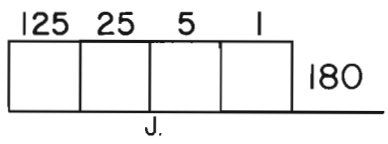
H.



D.



I.

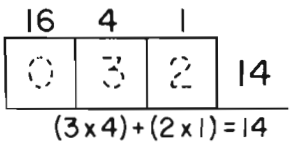


J.

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	1120	1,1,1,1,1,1

"Check List Addition"

Please use the smallest whole numbers possible in the boxes.



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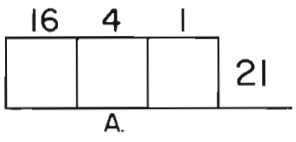

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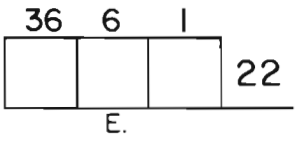

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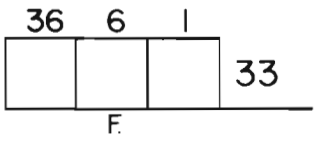

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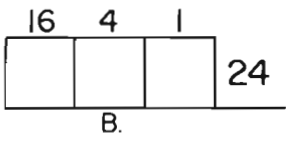

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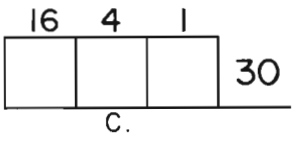

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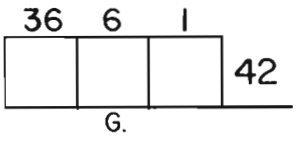

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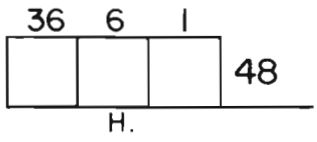

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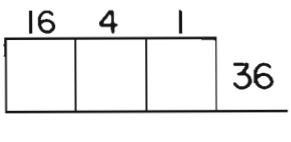

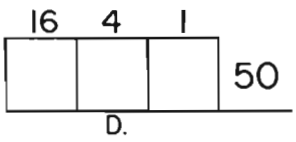

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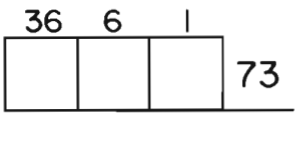

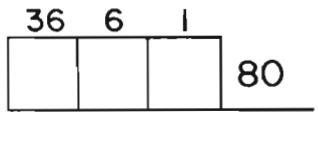

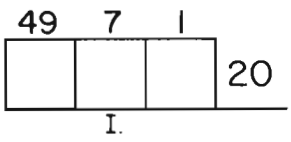

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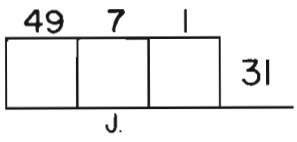

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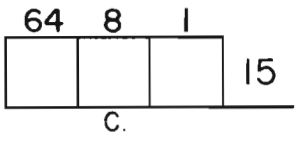

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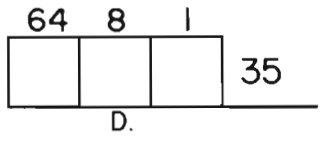

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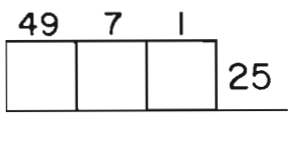

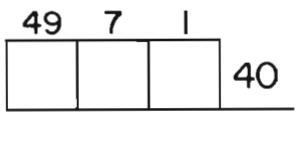

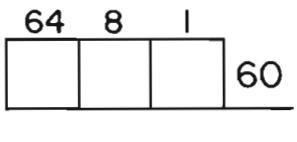

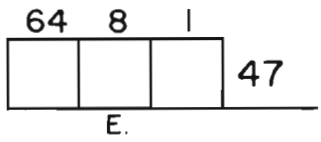

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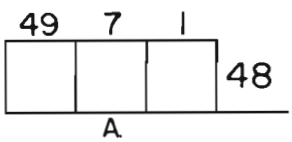
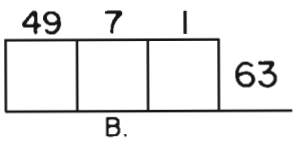


A.



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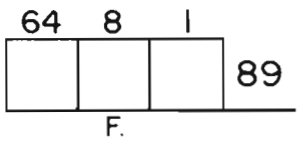

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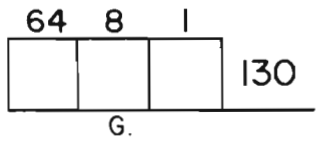
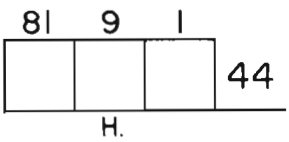


G.



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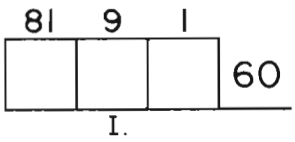

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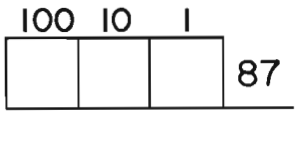

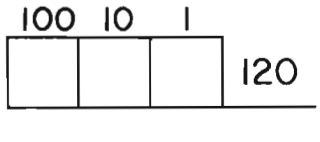

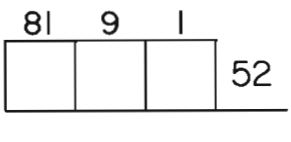

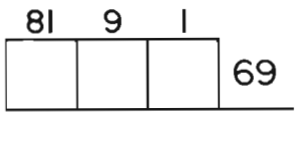

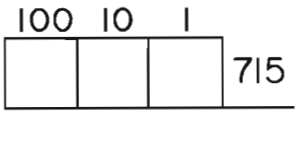

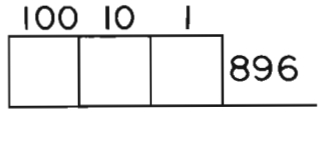

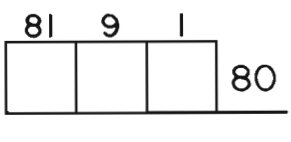

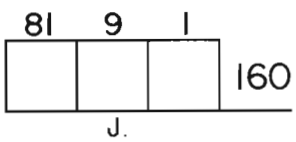

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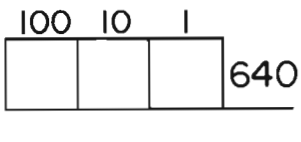

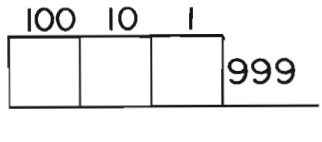

A.	E.	H.	B.	F.	I.	C.	G.	J.	D.
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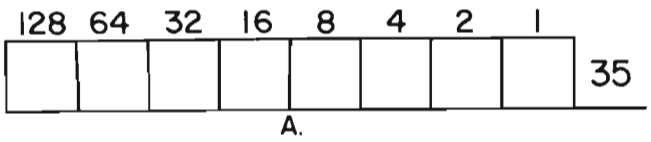
1,1,1	0,5,7	0,4,8	1,2,0	0,5,3	0,6,6	0,1,7	1,1,0	0,4,3	0,4,3

"Check List Addition"

Please use the smallest whole numbers possible in the boxes.



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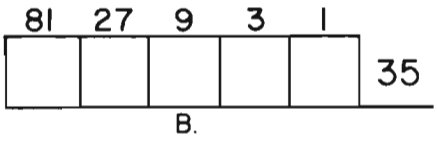

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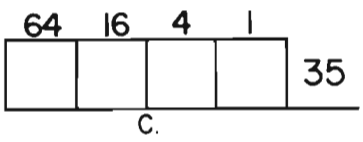

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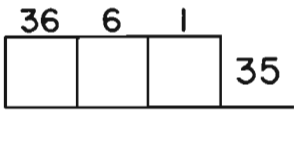

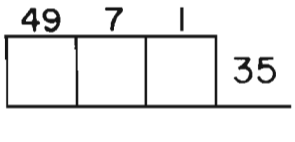

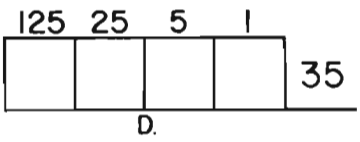

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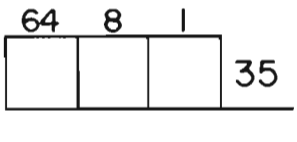

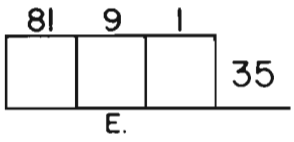

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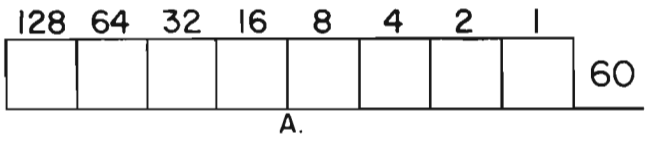

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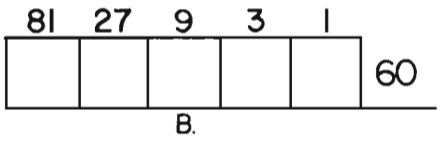

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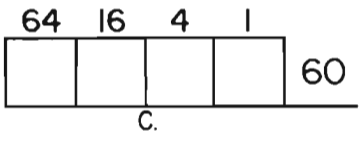

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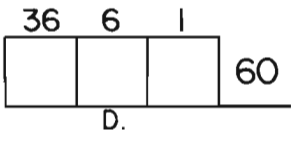

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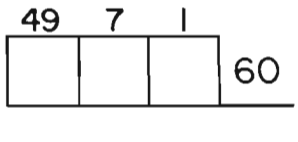

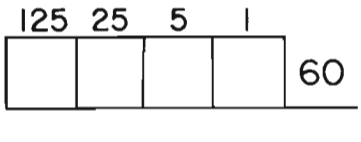

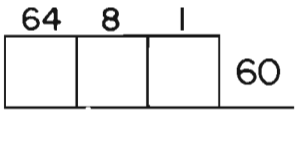

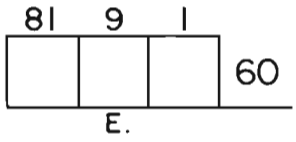

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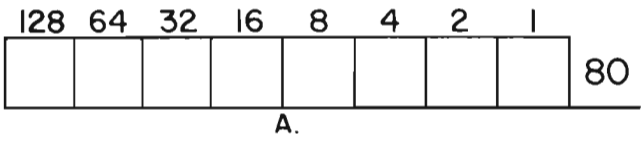

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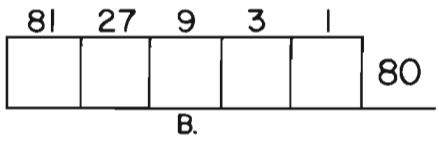

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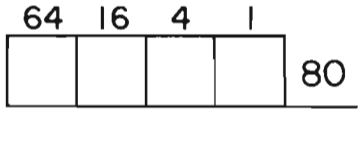

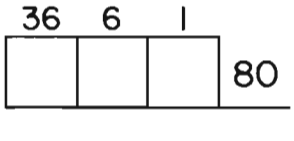

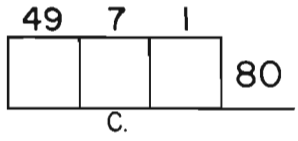

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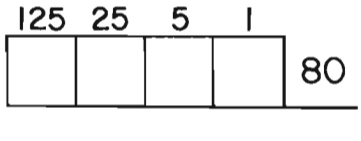

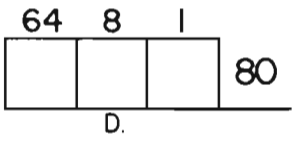

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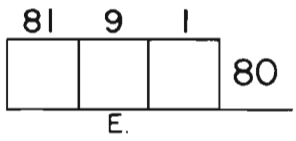
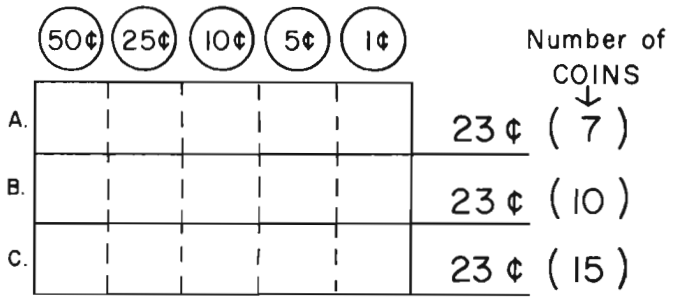


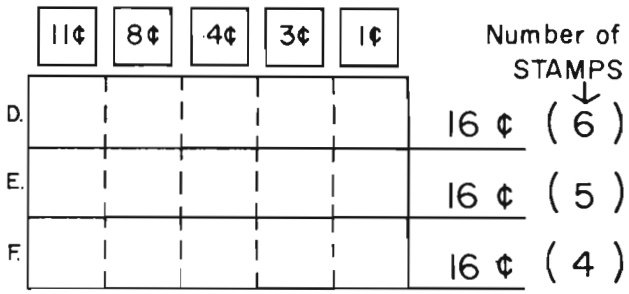
E.

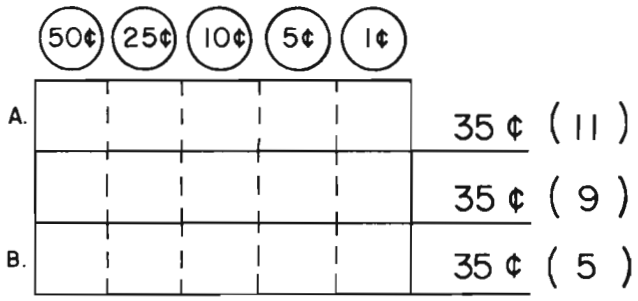
A.	B.	C.	D.	E.
0,1,0,1,0,0,0,0	0,2,0,2,0	0,2,0,3	1,4,0	0,3,8
0,0,1,0,0,0,1,1	0,2,2,2,2	1,4,3	0,1,2,0	0,8,8
0,0,1,1,1,1,0,0	0,1,0,2,2	0,3,3,0	1,2,0	0,6,6

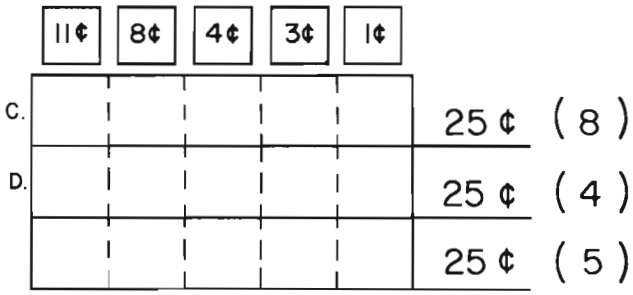
CHANGE and STAMP Problems

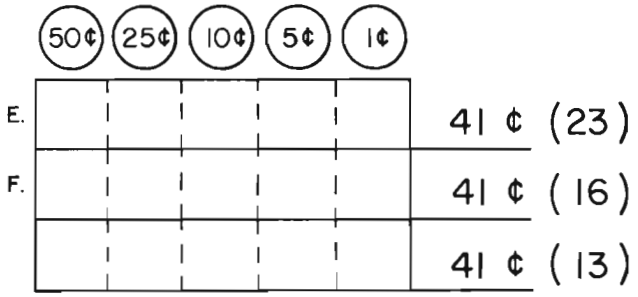
Rules: Show a combination of Coins or Stamps for the amounts shown . . . with exactly the number of Coins or Stamps indicated.

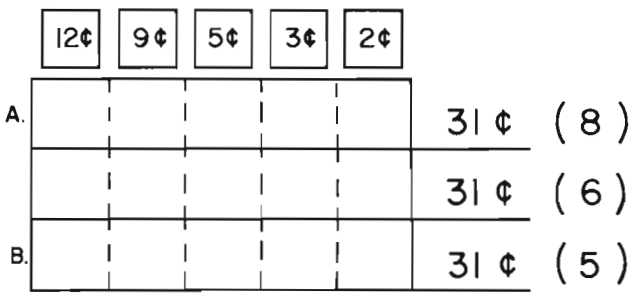


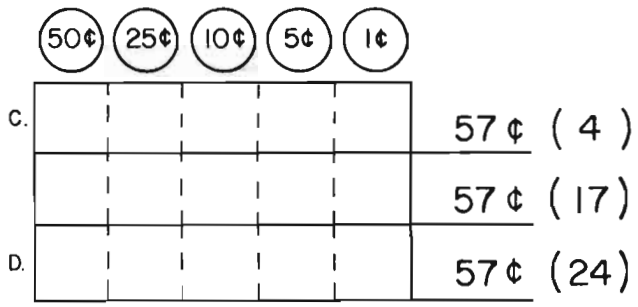


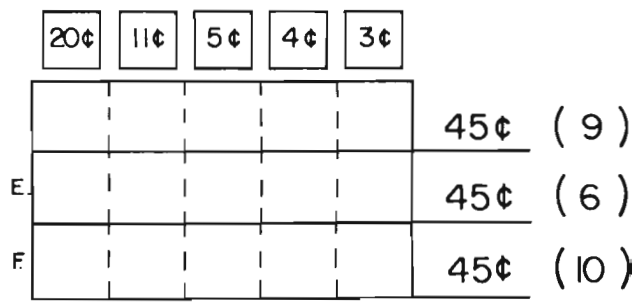












There may be other combinations than those shown below.

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.

128	64	32	16	8	4	2	1	
								40

81	27	9	3	1	
					40

64	16	4	1	
				38

36	6	1	
			32

49	7	1	
			37

125	25	5	1	
				86

64	8	1	
			57

81	9	1	
			69

128	64	32	16	8	4	2	1	
								132

81	27	9	3	1	
					98

64	16	4	1	
				100

36	6	1	
			75

49	7	1	
			89

125	25	5	1	
				180

64	8	1	
			62

81	9	1	
			75

128	64	32	16	8	4	2	1	
								77

81	27	9	3	1	
					63

64	16	4	1	
				56

36	6	1	
			85

49	7	1	
			99

125	25	5	1	
				124

64	8	1	
			127

81	9	1	
			160

How do you feel ?

0 x 8	1 x 8	2 x 8	3 x 8	4 x 8	5 x 8	6 x 8	7 x 8	8 x 8	9 x 8
0 x 8	10 x 8	20 x 8	30 x 8	40 x 8	50 x 8	60 x 8	70 x 8	80 x 8	90 x 8

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

$8\overline{)168}$ 21 ; 8 + 160 = 168	A. $8\overline{)376}$	B. $8\overline{)104}$
C. $8\overline{)304}$	D. $8\overline{)752}$	E. $8\overline{)520}$
F. $8\overline{)688}$	$8\overline{)472}$	$8\overline{)576}$

On your Own . . . all the way.

10 x 8 = 80	2 x 8 = 16	12 x 8 = 96
x 8	x 8	24 x 8
x 8	x 8	48 x 8
x 8	x 8	23 x 8
x 8	x 8	46 x 8
x 8	x 8	92 x 8

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

BUILDING and USING TABLES

0 x 5	1 x 5	2 x 5	3 x 5	4 x 5	5 x 5	6 x 5	7 x 5	8 x 5	9 x 5
0 x 5	10 x 5	20 x 5	30 x 5	40 x 5	50 x 5	60 x 5	70 x 5	80 x 5	90 x 5

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

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

CHAIN REACTIONS

7 (+8) (+8) (+8) (+8) (+8) (+8) (+8) (+8) 71 — J.

8 (+7) (+7) (+7) (+7) (+7) (+7) (+7) (+7) 64 — K.

10 (+9) (+9) (+9) (+9) (+9) (+9) (+9) (+9) 82 — L.

5 (+6) (+6) (+6) (+6) (+6) (+6) (+6) (+6) 53 — M.

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

0 x 9	1 x 9	2 x 9	3 x 9	4 x 9	5 x 9	6 x 9	7 x 9	8 x 9	9 x 9
0 x 9	10 x 9	20 x 9	30 x 9	40 x 9	50 x 9	60 x 9	70 x 9	80 x 9	90 x 9

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

A. 9 ⟌ 108	B. 9 ⟌ 279	C. 9 ⟌ 126
D. 9 ⟌ 819	E. 9 ⟌ 675	F. 9 ⟌ 243
G. 9 ⟌ 504	H. 9 ⟌ 612	I. 9 ⟌ 774

CHAIN REACTIONS

J. 7 (+6) (+6) (+6) (+6) (+6) (+6) (+6) (+6) 55

K. 8 (+9) (+9) (+9) (+9) (+9) (+9) (+9) (+9) 80

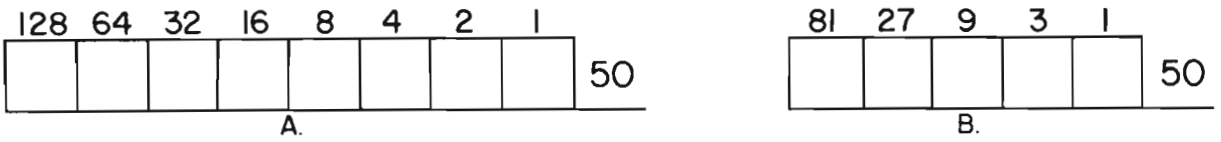
L. 6 (+7) (+7) (+7) (+7) (+7) (+7) (+7) (+7) 62

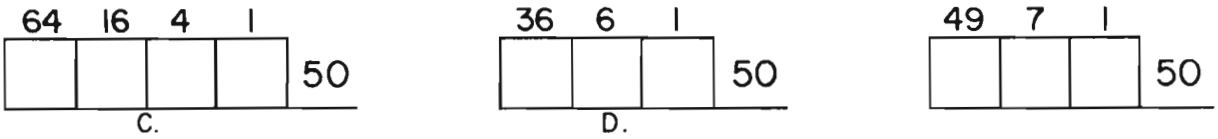
M. 9 (+8) (+8) (+8) (+8) (+8) (+8) (+8) (+8) 73

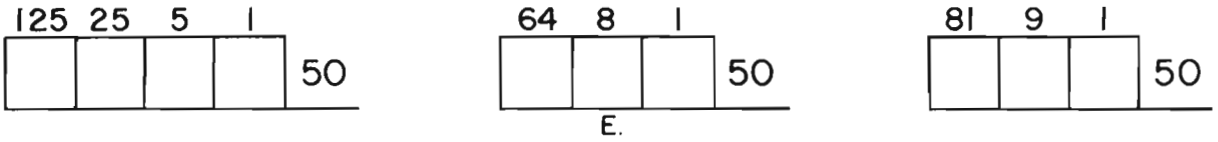
A.	B.	C.	D.	E.	F.	G.	H.	I.	J.	K.	L.	M.
13	32	14	89	75	27	56	65	85	31	45	35	40
12	31	12	91	68	30	55	68	86	30	44	34	41

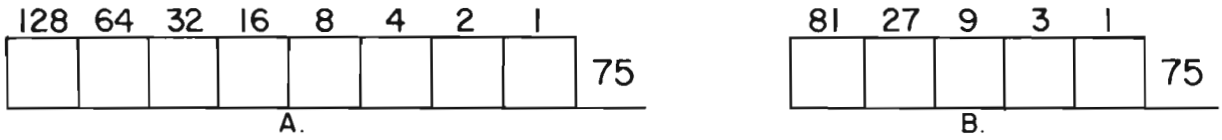
"Check List Addition"

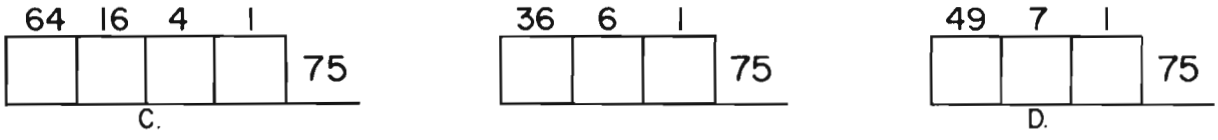
Please use the smallest whole numbers possible in the boxes.

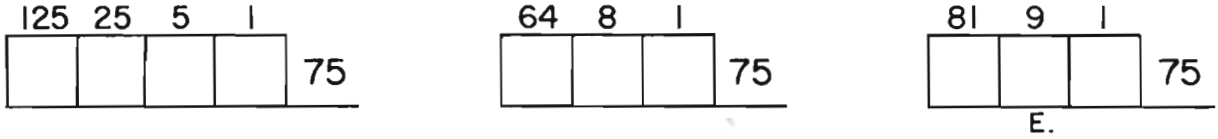


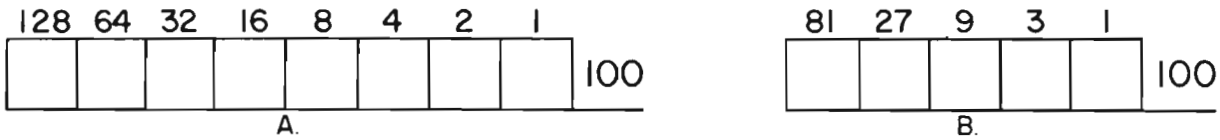


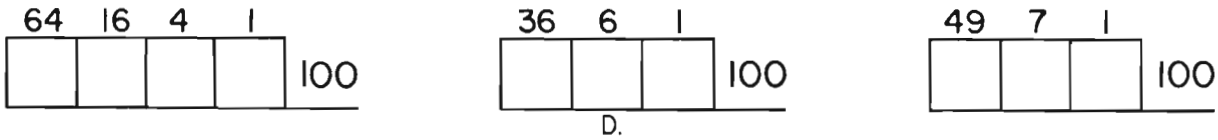


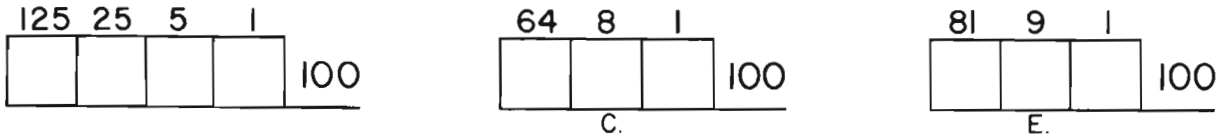












A.	B.	C.	D.	E.
0,1,1,0,0,1,0,0	0,2,2,1,0	0,3,0,2	1,2,2	0,8,3
0,1,0,0,1,0,1,1	0,1,2,1,2	1,4,4	1,3,5	0,6,2
0,0,1,1,0,0,1,0	1,0,2,0,1	1,0,2,3	2,4,4	1,2,1

BUILDING and USING TABLES

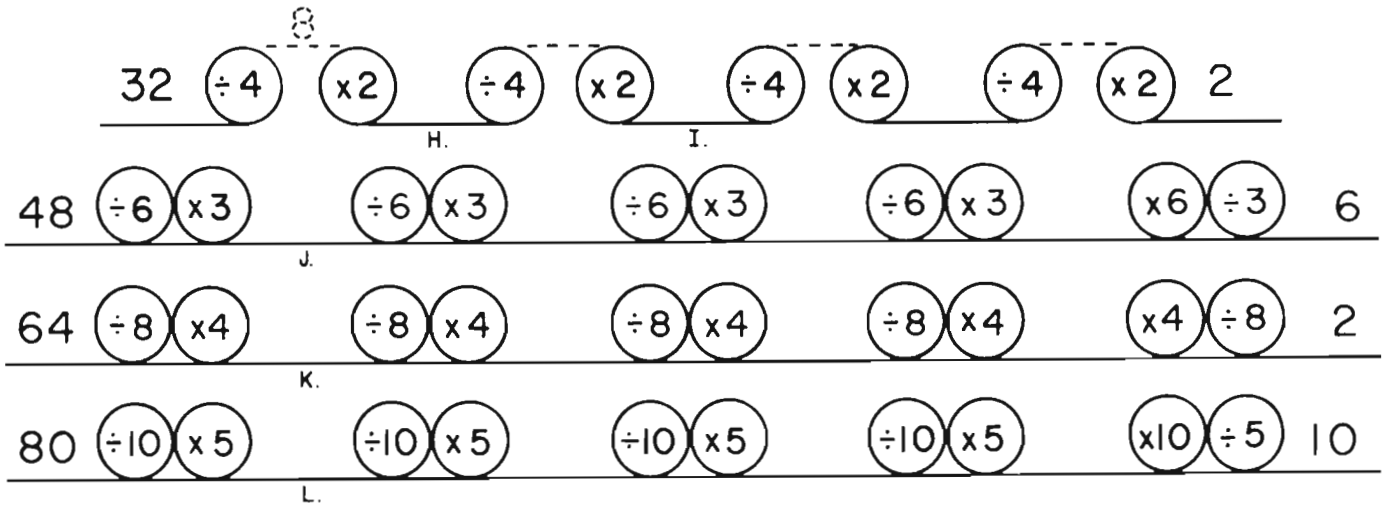
47 x 0 = 0	47 x 1 = 47	47 x 2	47 x 3	47 x 4	47 x 5	47 x 6	47 x 7	47 x 8	47 x 9

47 x 0 = 0	47 x 10 = 47•	47 x 20 = 94•	47 x 30 = •	47 x 40 = •	47 x 50 = •	47 x 60 = •	47 x 70 = •	47 x 80 = •	47 x 90 = •

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

47 x A. = 1316 (376 + 940)	47 x B. = 3572	47 x C. = 1833	47 x D. = 4324	47 x = 2209
47 x E. = 4465	47 x = 2632	47 x F. = 3478	47 x = 3149	47 x G. = 3901

CHAIN REACTIONS



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

25 x 0 = 0	25 x 1 = 25	25 x 2 = 50	25 x 3 = 75	25 x 4 = 100	25 x 5 =	25 x 6 =	25 x 7 =	25 x 8 =	25 x 9 =

5 x 0 =	25 x 10 = 250	25 x 20 = 500	25 x 30 = 750	25 x 40 = 1000	25 x 50 =	25 x 60 =	25 x 70 =	25 x 80 =	25 x 90 =

A. 25 | 1075 — 4; 100; 75

B. 25 | 950 — 75

C. 25 | 1875

D. 25 | 2300

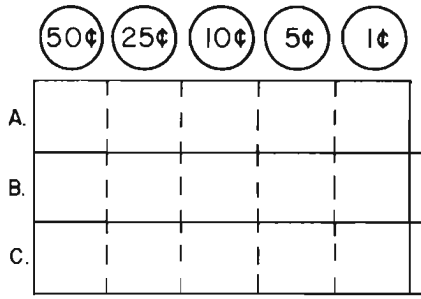
E. 25 | 1625

F. 25 | 2425

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.

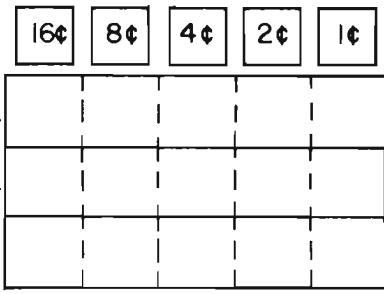


Number of COINS ↓

A. 47 ¢ (15)

B. 95 ¢ (9)

C. 68 ¢ (32)

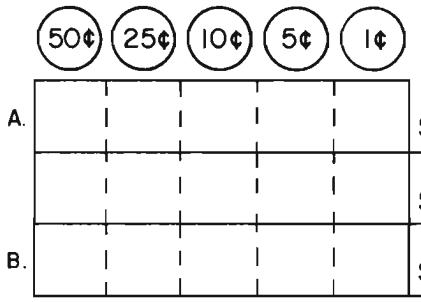


Number of STAMPS ↓

D. 31 ¢ (5)

E. 23 ¢ (4)

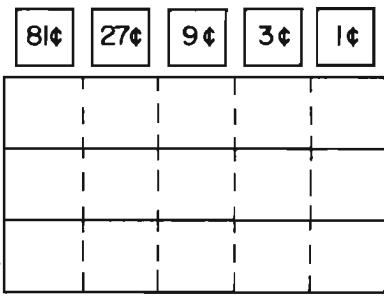
F. 40 ¢ (7)



A. $ 1.40 (11)

$ 1.20 (12)

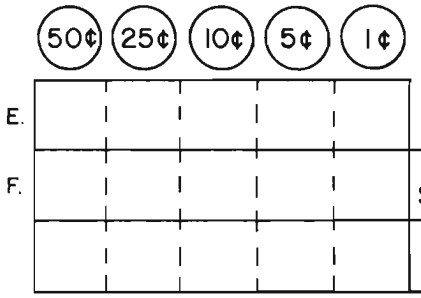
B. $ 1.71 (13)



50 ¢ (6)

C. 80 ¢ (8)

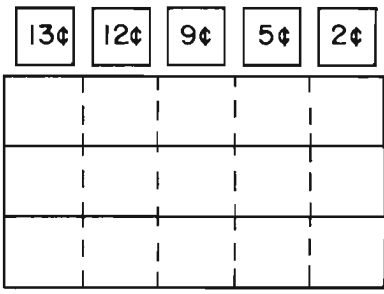
D. $1.00 (8)



E. 71 ¢ (25)

F. $ 1.60 (15)

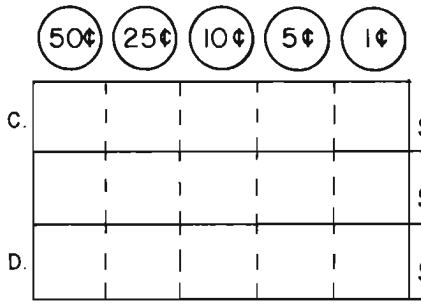
90 ¢ (30)



27 ¢ (4)

A. 49 ¢ (5)

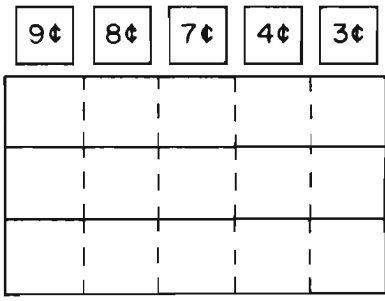
B. 62 ¢ (11)



C. $ 1.82 (10)

$ 2.30 (12)

D. $ 1.55 (15)



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

18 x 0	18 x 1	18 x 2	18 x 3	18 x 4	18 x 5	18 x 6	18 x 7	18 x 8	18 x 9
18 x 0	18 x 10	18 x 20	18 x 30	18 x 40	18 x 50	18 x 60	18 x 70	18 x 80	18 x 90

18) 378

18) 1314

18) 882

18) 1170

18) 1044

18) 1512

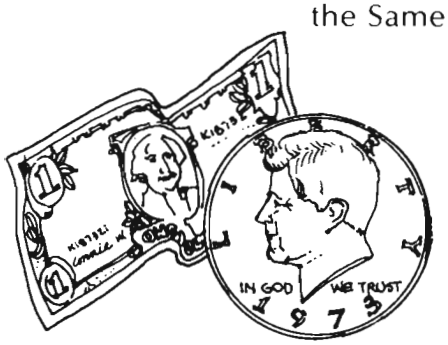
18) 666

18) 1692

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.



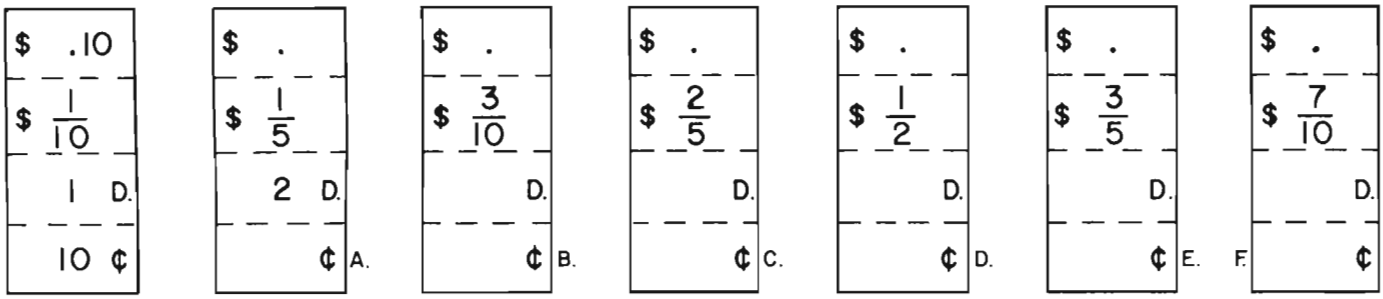
$ 1.00 $ 1 10 D. 100 ¢	DIMES	$ .50 $ $\frac{1}{2}$ 5 D. ¢ A.	DIMES	$ .25 $ $\frac{1}{4}$ $2\frac{1}{2}$ D. ¢ B.	$ .10 $ $\frac{1}{10}$ D. C. ¢	$ .05 $ $\frac{1}{20}$ $\frac{1}{2}$ D. ¢	D. $ .01 $ $\frac{1}{100}$ $\frac{1}{10}$ D. ¢

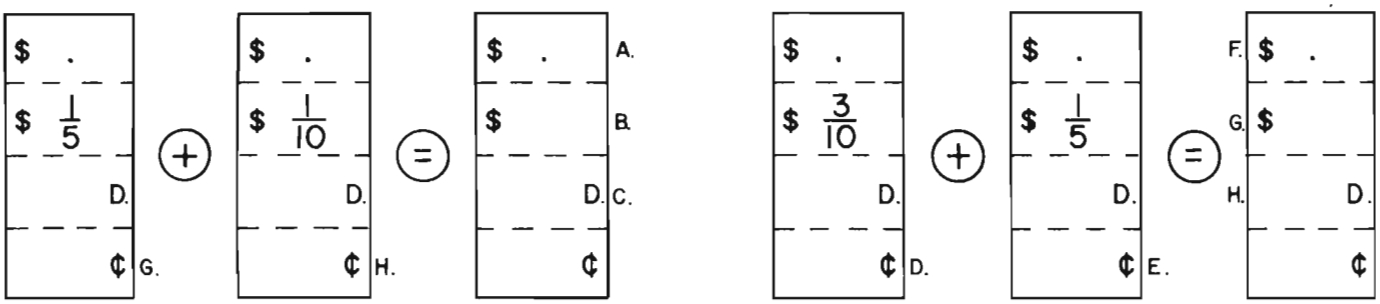
$. $ $\frac{1}{5}$ 2 D. ¢ E. F.	$. $ $\frac{3}{10}$ D. ¢ G.	$. $ $\frac{2}{5}$ D. A. ¢ B.	$. $ $\frac{1}{2}$ D. C. ¢ D.	$. $ $\frac{3}{5}$ D. E. ¢ F.	$. $ $\frac{7}{10}$ D. G. ¢ A.	B. $. $ $\frac{4}{5}$ D. ¢

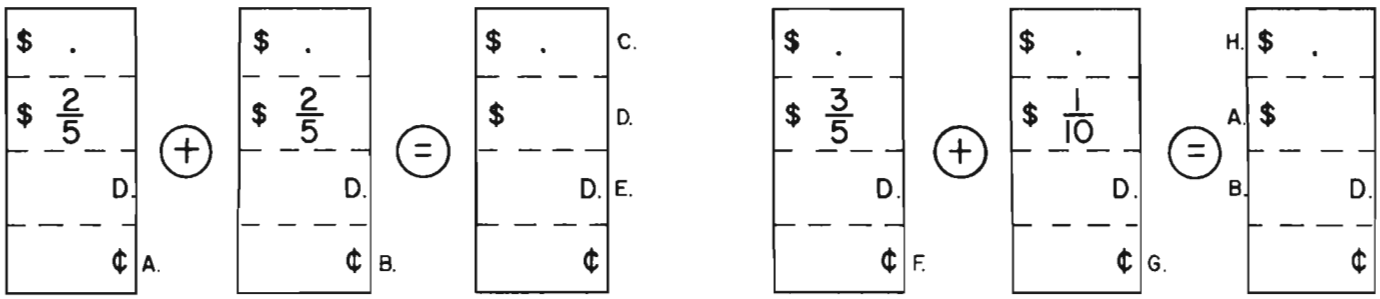
$. $ $\frac{9}{10}$ D. D. ¢ C.	$. $ $\frac{1}{20}$ $\frac{1}{2}$ D. 5 ¢ E.	$. $ $\frac{3}{20}$ $1\frac{1}{2}$ D. ¢ F.	$. $ $\frac{1}{2}$ $2\frac{1}{2}$ D. ¢ G. A. B.	$. $ $\frac{7}{20}$ $3\frac{1}{2}$ D. ¢ C.	$. $ $\frac{9}{20}$ $4\frac{1}{2}$ D. ¢ D. E.	F. $. $ $5\frac{1}{2}$ D. ¢ G.

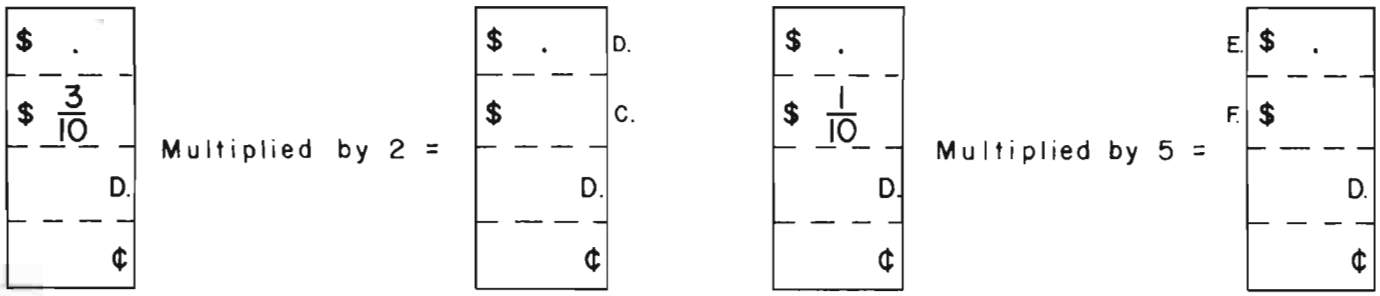
$. $ $\frac{1}{100}$ $\frac{1}{10}$ D. 1 ¢ A.	$. $ $\frac{1}{50}$ D. C. 2 ¢ B.	$. $ $\frac{3}{100}$ D. E. 3 ¢ D.	$. $ $\frac{1}{25}$ D. G. 4 ¢ F.

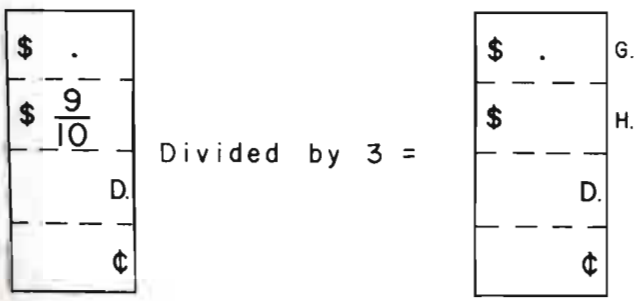
A.	B.	C.	D.	E.	F.	G.
4	25	.35	1	.05	60	.25
50	80	5	.03	6	20	55
$\frac{5}{20}, \frac{1}{4}$	.02	1	9	45	.04	$\frac{4}{10}, \frac{2}{5}$
70	40	$\frac{2}{10}, \frac{1}{5}$	.45	.20	.15	7
.01	25	.90	50	$\frac{3}{10}$	55	30



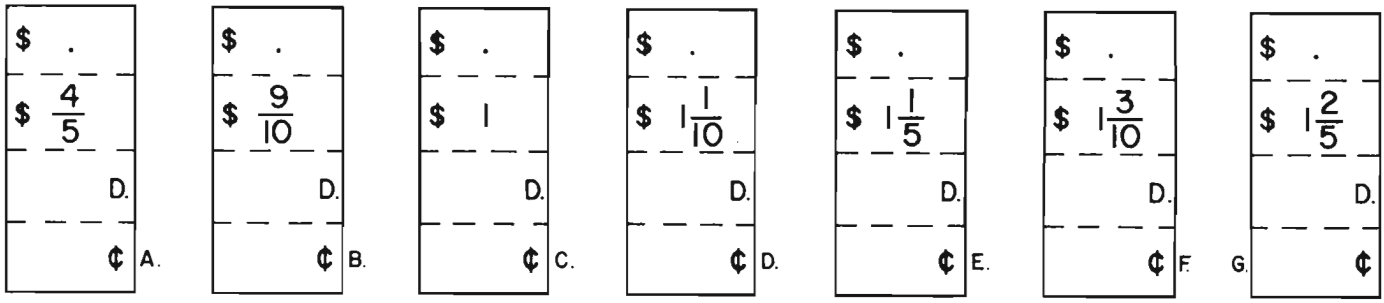


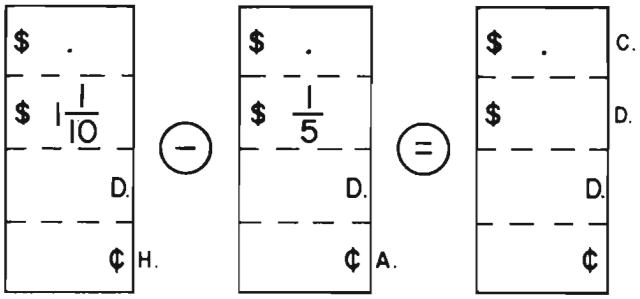


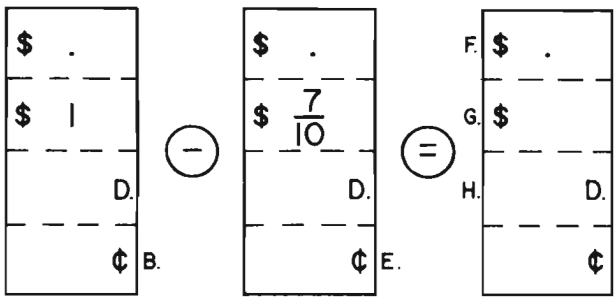


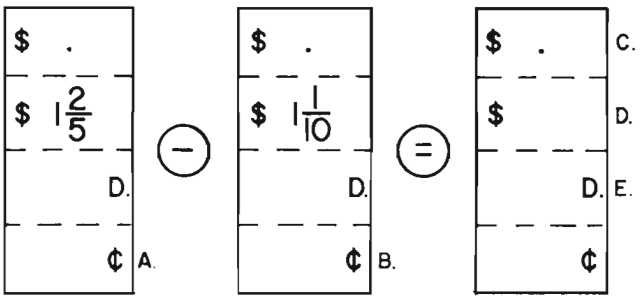


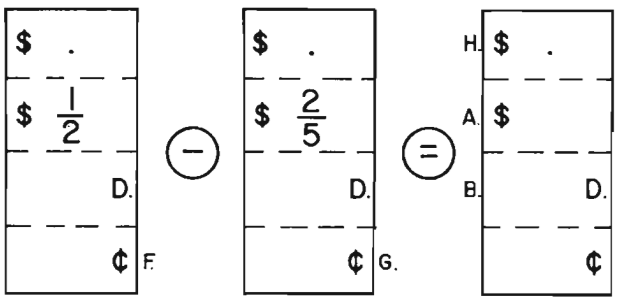
A.	B.	C.	D.	E.	F.	G.	H.
20	$\frac{3}{10}$	.80	30	60	.50	10	$\frac{3}{10}$
40	7	$\frac{3}{5}$	50	20	$\frac{1}{2}$	20	5
30	30	3	.60	8	70	.30	.70
$\frac{7}{10}$	40	40	$\frac{4}{5}$	50	60	$\frac{1}{2}$	10

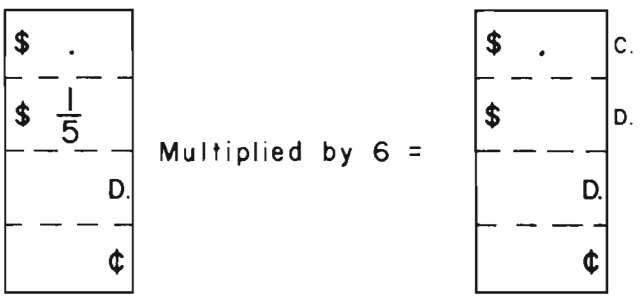


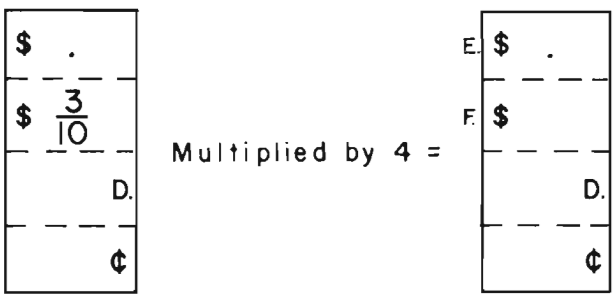


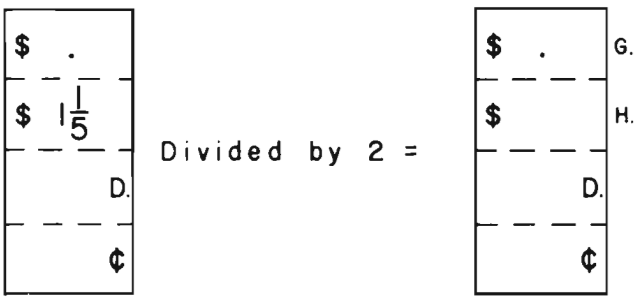








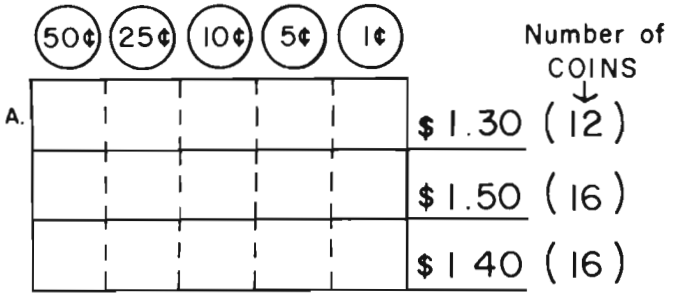


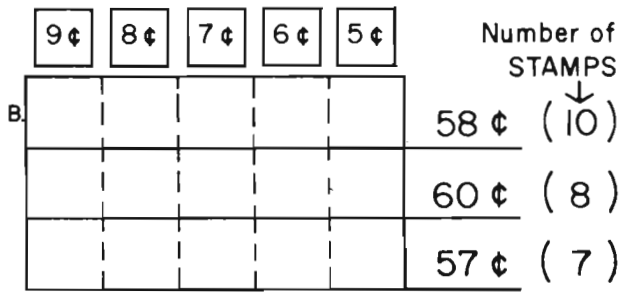


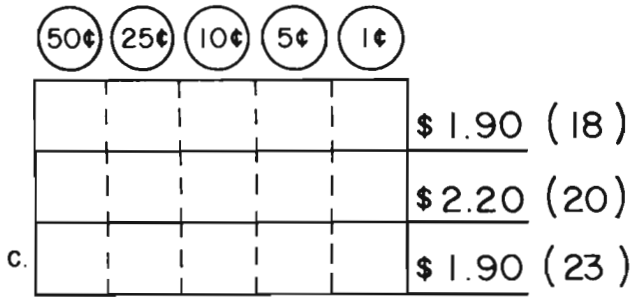
A.	B.	C.	D.	E.	F.	G.	H.
80	1	1.20	110	3	.30	$\frac{3}{10}$	90
140	110	100	$\frac{9}{10}$	1.20	130	40	3
20	90	.30	$1\frac{1}{5}$	70	50	140	$\frac{3}{5}$
$\frac{1}{10}$	100	.90	$\frac{3}{10}$	120	$1\frac{1}{5}$	.60	110

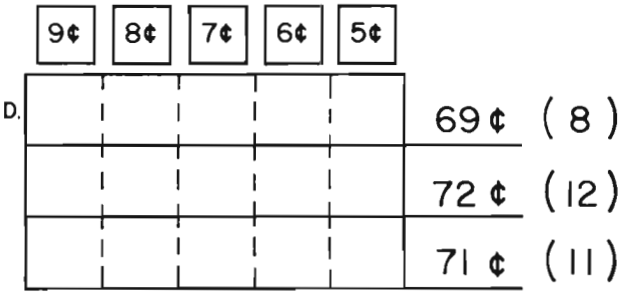
CHANGE and STAMP Problems

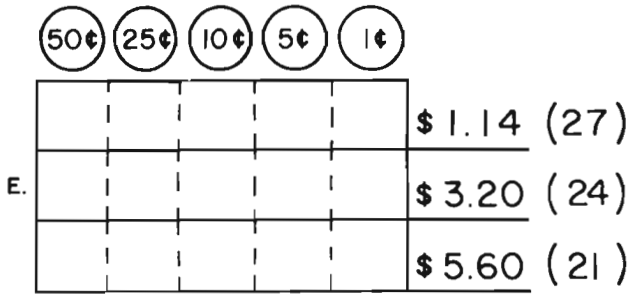
Rules: Show a combination of Coins or Stamps for the amounts shown . . . with exactly the number of Coins or Stamps indicated.

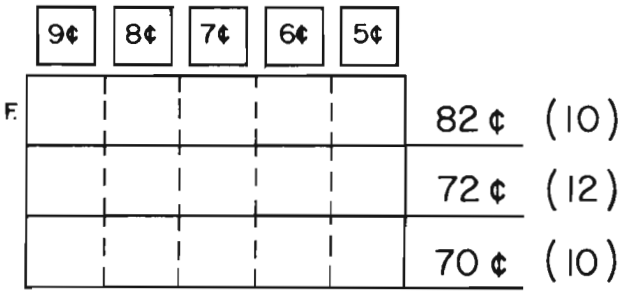


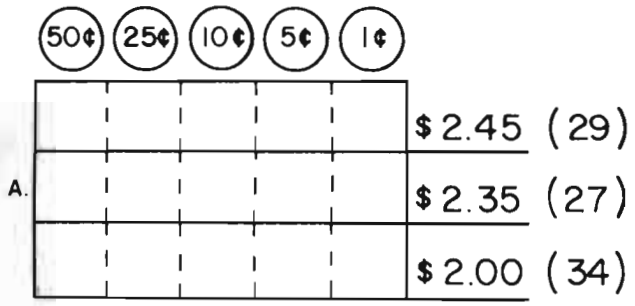


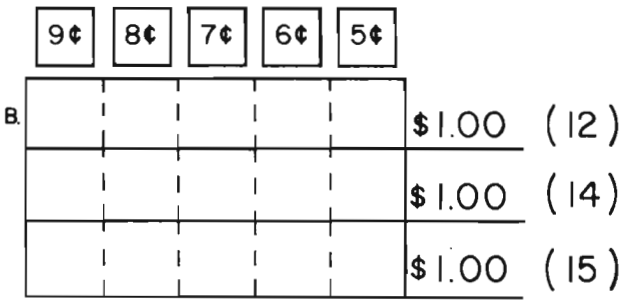






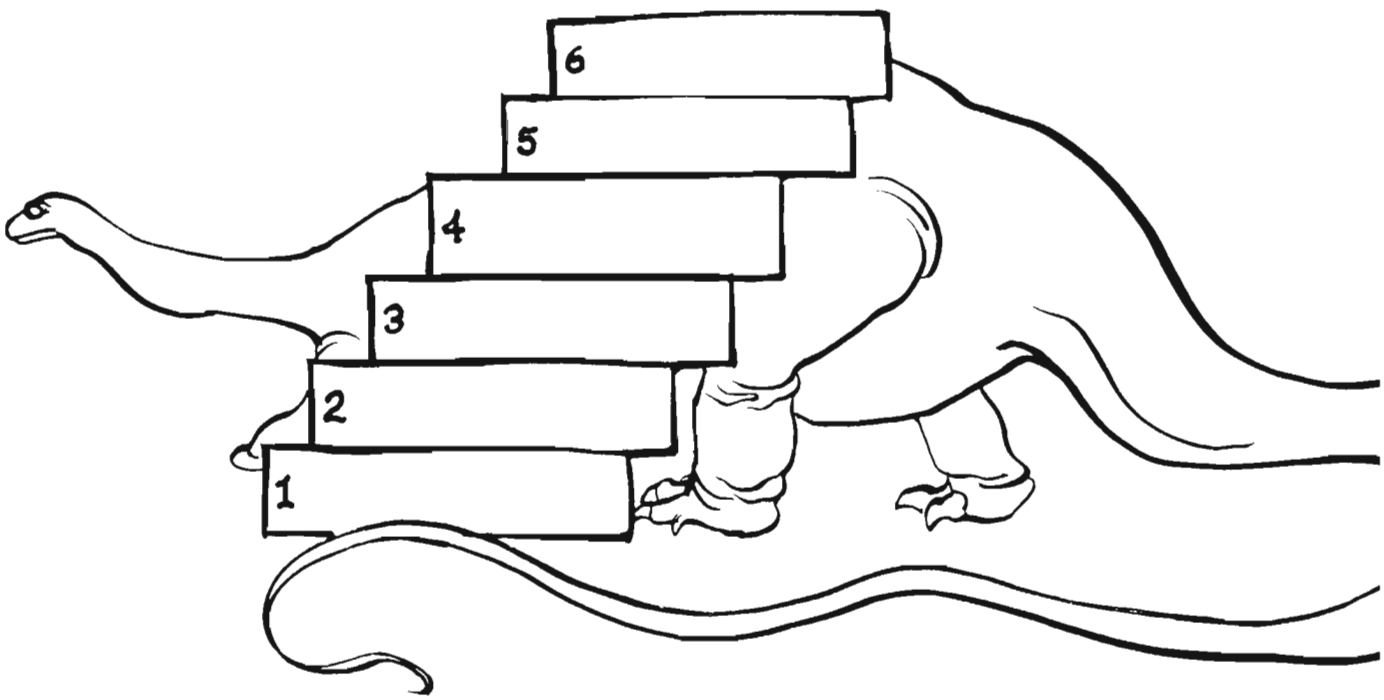






There may be other combinations than those shown below.

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


6
5
4
3
2
1

this book belongs to _____ *este libro es de*