



levels d.e.f

for use with INDIVIDUALIZED COMPUTATION

MY PROGRESS BOOK

Cover Art

The First/Second grade class of Elaine Greene at River School.

Editor and General Manager
ROBERT BECK

Art and Production Manager
LIESELOTTE ESSER

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Suite 414 • 1211 Connecticut Ave., N.W.
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FENCE ARITHMETIC

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

___ (10's)

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

___ (11's)

4	5	7	3
3	7	6	2
9	5	6	4
1	2	4	4

___ (12's)

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

___ (13's)

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

___ (14's)

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

___ (15's)

CHAIN REACTIONS

7 (+4) (+4) (+4) (+4) (-5) (-5) (-5) (-5)

30 (-3) (-3) (-3) (-3) (-3) (-3) (-3) (-3)

0 (+1) (+2) (+3) (+4) (+5) (+6)

36 (-1) (-2) (-3) (-4) (-5) (-6)

REACCIÓN EN CADENA



How do you feel?
¿Cómo se siente?

"IN and OUT"

"AFUERA y ADENTRO"

--- Total
 = In
 — Out

--- Total
9 Adentro
 — Afuera

 =
 —

8
 —

5
 —

17
 —

FENCE ARITHMETIC

ARITMETICA USANDO CERCAS



How do you feel?
¿Cómo se siente?

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

16's

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

17's

7	1	4	4
6	5	8	9
6	6	10	9
6	3	3	3

18's

CHAIN REACTION

REACCIÓN EN CADENA

6 (+6) (+6) (+6) (+1) (+5) (+5)

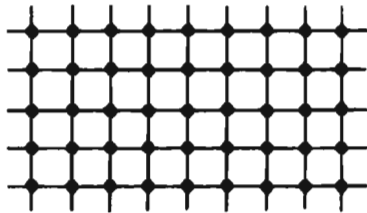
3 (+3) (+3) (+3) (+3) (+3) (+3)



How do you feel?
¿Cómo se siente?

More SHORTHAND for the same ideas

TAQUIGRAFIA para las mismas ideas



$$\frac{45 \div 5 = 9}{\underline{\quad}}$$

$$\frac{5 \times 9 = \underline{\quad}}{\underline{\quad}}$$

$$\frac{45 \div 9 = \underline{\quad}}{\underline{\quad}}$$

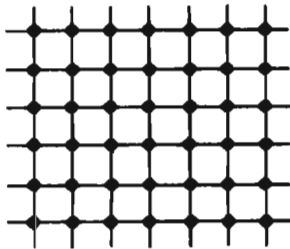
$$\frac{9 \times 5 = \underline{\quad}}{\underline{\quad}}$$

$$\begin{array}{r} \underline{\quad} 9 \\ \times 5 \\ \hline 45 \end{array}$$

$$\begin{array}{r} \underline{\quad} 5 \\ \times 9 \\ \hline \end{array}$$

$$5 \overline{)45}$$

$$9 \overline{)45}$$



$$\frac{42 \div 6 = 7}{\underline{\quad}}$$

$$\frac{\quad \times 6 = \underline{\quad}}{\underline{\quad}}$$

$$\frac{\quad \div 7 = \underline{\quad}}{\underline{\quad}}$$

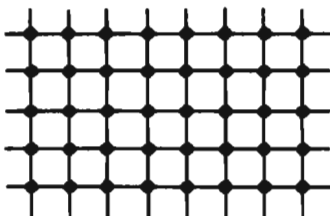
$$\frac{\quad \times 7 = \underline{\quad}}{\underline{\quad}}$$

$$\begin{array}{r} \underline{\quad} 7 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} \underline{\quad} 6 \\ \times 7 \\ \hline \end{array}$$

$$6 \overline{)7}$$

$$7 \overline{)42}$$



$$\frac{8 \times 5 = \underline{\quad}}{\underline{\quad}}$$

$$\frac{\quad \div 5 = \underline{\quad}}{\underline{\quad}}$$

$$\frac{5 \times 8 = \underline{\quad}}{\underline{\quad}}$$

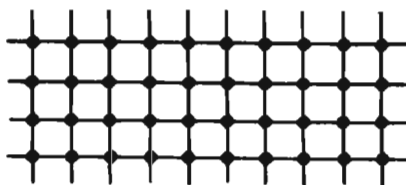
$$\frac{\quad \div 8 = \underline{\quad}}{\underline{\quad}}$$

$$\begin{array}{r} \underline{\quad} 8 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} \underline{\quad} \quad \\ \times \quad \\ \hline \end{array}$$

$$5 \overline{\quad}$$

$$8 \overline{)40}$$



$$\frac{4 \times 10 = \underline{\quad}}{\underline{\quad}}$$

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

$$\frac{10 \times 4 = \underline{\quad}}{\underline{\quad}}$$

$$\frac{\underline{\quad} \quad}{\underline{\quad} \quad}$$

$$\frac{\quad \div 10 = \underline{\quad}}{\underline{\quad}}$$

$$\frac{\quad \quad}{\underline{\quad} \quad}$$

$$\frac{\quad \div 4 = \underline{\quad}}{\underline{\quad}}$$

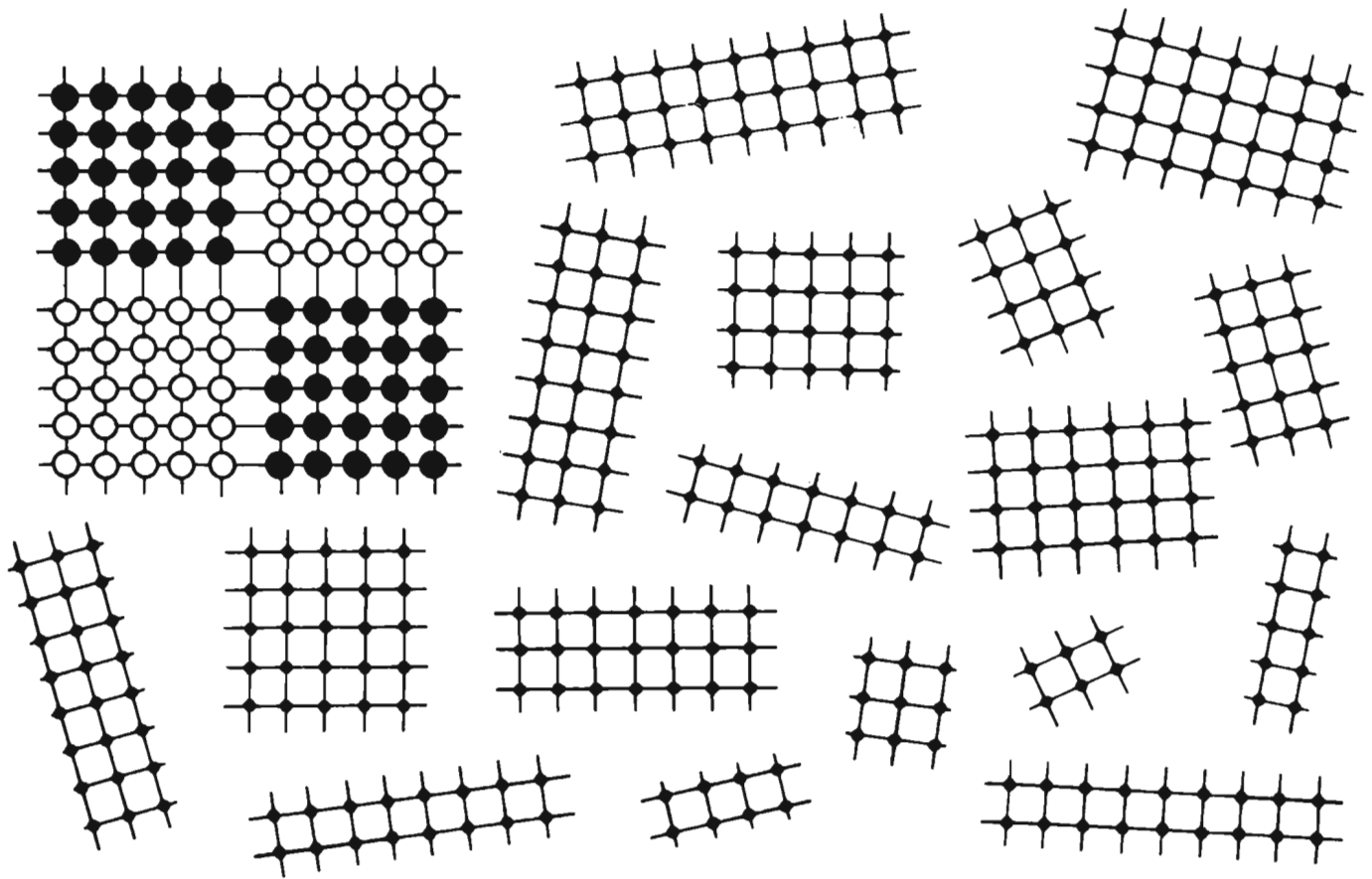
$$4 \overline{\quad}$$


$$10 \overline{)40}$$



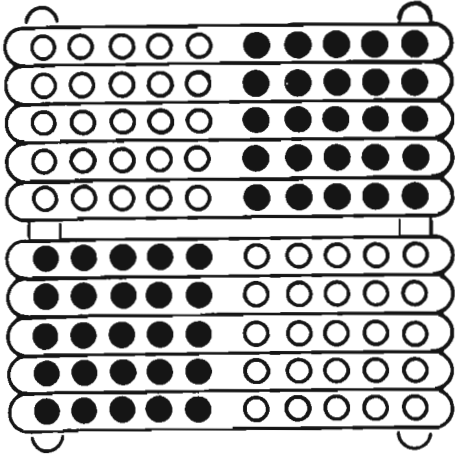
How do you feel?
¿Cómo se siente?

9 (+9) (+9) (+9) (+9) (+9) (+9) (+9) (+9) 81



$\begin{array}{r} 3 \\ \times 2 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ \times 3 \\ \hline \end{array}$	$\begin{array}{r} 2 \\ \times 5 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ \times 3 \\ \hline \end{array}$	$\begin{array}{r} 9 \\ \times 2 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ \times 2 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ \times 5 \\ \hline \end{array}$
$5 \overline{)15}$	$6 \overline{)24}$	$3 \overline{)12}$	$7 \overline{)28}$	$4 \overline{)16}$	$5 \overline{)30}$	$6 \overline{)18}$
$\begin{array}{r} 4 \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ \times 6 \\ \hline \end{array}$	$\begin{array}{r} 2 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ \times 5 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ \times 3 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ \times 4 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ \times 9 \\ \hline \end{array}$
$3 \overline{)21}$	$4 \overline{)28}$	$5 \overline{)25}$	$4 \overline{)24}$	$5 \overline{)20}$		

How do you feel?
¿Cómo se siente?



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

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

$$\begin{array}{r} 5 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ \times 8 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \\ \times 8 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 3 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ \times 8 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ \times 8 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ \times 5 \\ \hline \end{array}$$

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

$$\begin{array}{r} 9 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 2 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 2 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ \times 8 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ \times 8 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} 2 \\ \times 3 \\ \hline \end{array}$$

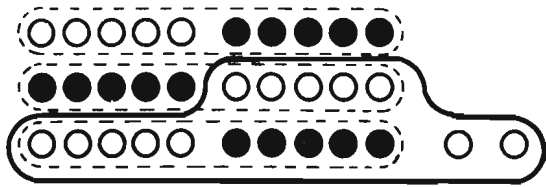
$$\begin{array}{r} 3 \\ \times 8 \\ \hline \end{array}$$



How do you feel?
¿Cómo se siente?

“OUT and IN”
and Related Examples

“AFUERA y ADENTRO”
y Ejemplos Relacionados

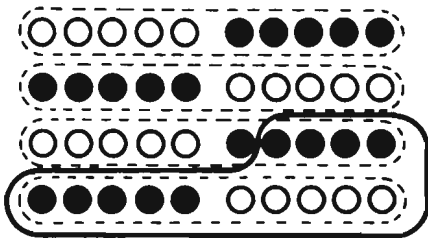


$$\begin{array}{r} 32 \text{ Total} \\ - 17 \text{ Adentro} \\ \hline \end{array}$$

Out _____ Afuera

$$\begin{array}{r} 32 \\ - 15 \\ \hline \end{array} \quad \begin{array}{r} 32 \\ - 12 \\ \hline \end{array} \quad \begin{array}{r} 32 \\ - 3 \\ \hline \end{array}$$

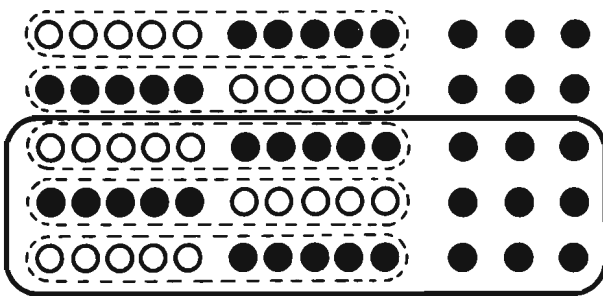
$$\begin{array}{r} 32 \\ + 8 \\ \hline \end{array} \quad \begin{array}{r} 32 \\ + 48 \\ \hline \end{array} \quad \begin{array}{r} 15 \\ + 17 \\ \hline \end{array}$$



$$\begin{array}{r} --- \\ + \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 26 \\ + 15 \\ \hline \end{array} \quad \begin{array}{r} 14 \\ + 26 \\ \hline \end{array} \quad \begin{array}{r} 15 \\ + 27 \\ \hline \end{array}$$

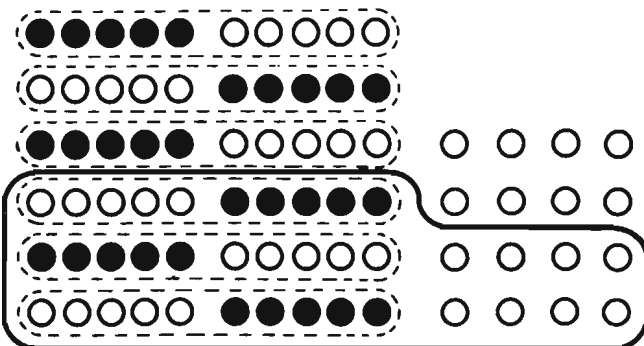
$$\begin{array}{r} 40 \\ - 14 \\ \hline \end{array} \quad \begin{array}{r} 42 \\ - 16 \\ \hline \end{array} \quad \begin{array}{r} 40 \\ - 16 \\ \hline \end{array}$$



$$\begin{array}{r} --- \\ + \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 39 \\ + 11 \\ \hline \end{array} \quad \begin{array}{r} 50 \\ + 15 \\ \hline \end{array} \quad \begin{array}{r} 49 \\ + 16 \\ \hline \end{array}$$

$$\begin{array}{r} 65 \\ - 39 \\ \hline \end{array} \quad \begin{array}{r} 65 \\ - 16 \\ \hline \end{array} \quad \begin{array}{r} 75 \\ - 26 \\ \hline \end{array}$$



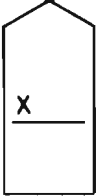
$$\begin{array}{r} --- \\ + \\ \hline \\ \hline \end{array}$$

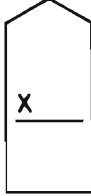
$$\begin{array}{r} 39 \\ + 39 \\ \hline \end{array} \quad \begin{array}{r} 29 \\ + 69 \\ \hline \end{array} \quad \begin{array}{r} 39 \\ + 48 \\ \hline \end{array}$$

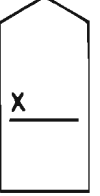
How do you feel?
¿Cómo se siente?

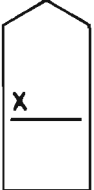


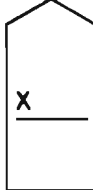
WINDOWS and PANES . . . Tags . . . Bars and Shading

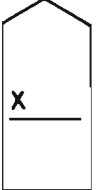
--- $\frac{2}{4}$ = 

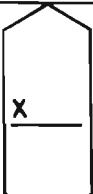
--- $\frac{1}{2}$ = 

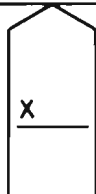
--- $\frac{3}{4}$ = 

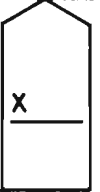
--- $\frac{3}{6}$ = 

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

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

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

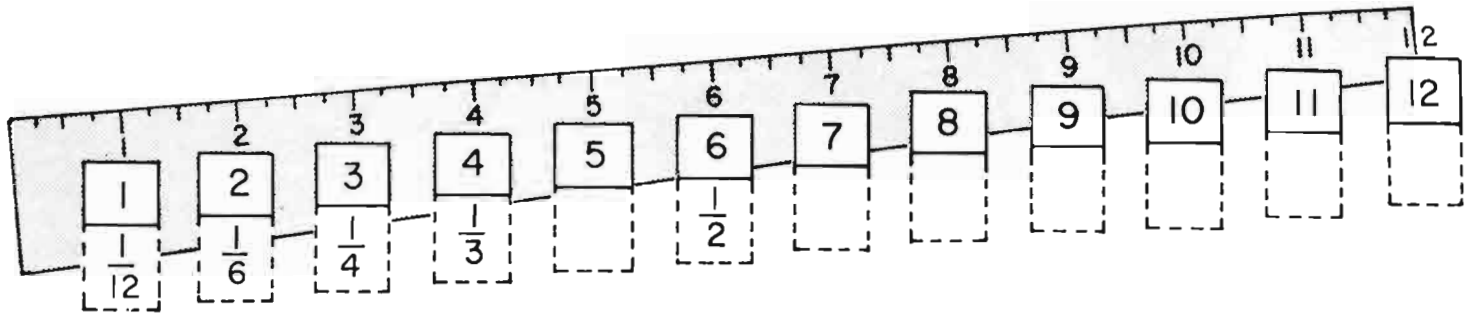
--- $\frac{1}{2}$ = 

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



How do you feel?

More "DOUBLE-TALK"



(fraction of 1 foot)

There are inches
in foot

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

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

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

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

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

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

3 feet = _____ inches

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

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

+ =
 $\frac{1}{2}$ + $\frac{1}{4}$ = _____

+ =
 $\frac{1}{2}$ + $\frac{1}{6}$ = _____

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

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

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

- =
 $\frac{5}{6}$ - $\frac{2}{3}$ = _____

(2x) =
 $\frac{1}{4}$ = _____

(3x) =
 $\frac{1}{6}$ = _____

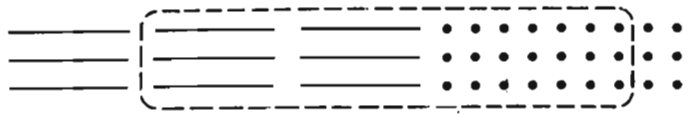
($\div 2$) =
 $\frac{2}{3}$ = _____

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



How do you feel?

BEANSTICK MULTIPLICATION and DIVISION . . . and Related Examples



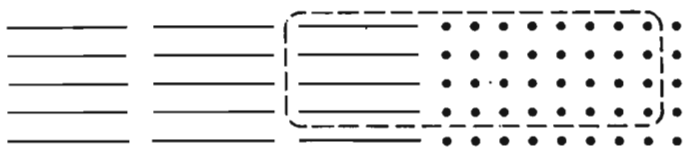
$$3 \overline{) 27}$$

$$3 \overline{) 87}$$

$$3 \overline{) 78}$$

$$4 \overline{) 27}$$

$$27 \overline{) 81}$$



$$4 \overline{) 72}$$

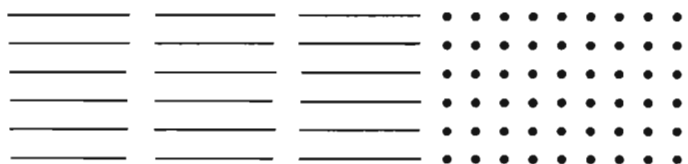
$$4 \overline{) 76}$$

$$4 \overline{) 68}$$

$$2 \overline{) 72}$$

$$8 \overline{) 72}$$

Please draw your own sketches.



$$6 \overline{) 24}$$

$$6 \overline{) 150}$$

$$3 \overline{) 150}$$

$$6 \overline{) 72}$$

$$6 \overline{) 13}$$

$$6 \overline{) 180}$$

$$6 \overline{) 192}$$



$$6 \overline{) 210}$$

$$6 \overline{) 204}$$

$$6 \overline{) 36}$$

$$3 \overline{) 204}$$

$$6 \overline{) 108}$$

$$3 \overline{) 34}$$

$$6 \overline{) 432}$$



How do you feel ?

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													

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

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

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

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

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

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

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

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

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

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

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

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

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



How do you feel ?

“Check List Addition”

Please use the smallest whole numbers possible in the boxes.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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



How do you feel ?

BUILDING and USING TABLES

$\begin{array}{r} 18 \\ \times 0 \\ \hline \end{array}$	$\begin{array}{r} 18 \\ \times 1 \\ \hline \end{array}$	$\begin{array}{r} 18 \\ \times 2 \\ \hline \end{array}$	$\begin{array}{r} 18 \\ \times 3 \\ \hline \end{array}$	$\begin{array}{r} 18 \\ \times 4 \\ \hline \end{array}$	$\begin{array}{r} 18 \\ \times 5 \\ \hline \end{array}$	$\begin{array}{r} 18 \\ \times 6 \\ \hline \end{array}$	$\begin{array}{r} 18 \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} 18 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 18 \\ \times 9 \\ \hline \end{array}$
$\begin{array}{r} 18 \\ \times 0 \\ \hline \end{array}$	$\begin{array}{r} 18 \\ \times 10 \\ \hline \end{array}$	$\begin{array}{r} 18 \\ \times 20 \\ \hline \end{array}$	$\begin{array}{r} 18 \\ \times 30 \\ \hline \end{array}$	$\begin{array}{r} 18 \\ \times 40 \\ \hline \end{array}$	$\begin{array}{r} 18 \\ \times 50 \\ \hline \end{array}$	$\begin{array}{r} 18 \\ \times 60 \\ \hline \end{array}$	$\begin{array}{r} 18 \\ \times 70 \\ \hline \end{array}$	$\begin{array}{r} 18 \\ \times 80 \\ \hline \end{array}$	$\begin{array}{r} 18 \\ \times 90 \\ \hline \end{array}$

$$\begin{array}{r} 18 \\ \times 378 \\ \hline \end{array}$$

$$\begin{array}{r} 18 \\ \times 1314 \\ \hline \end{array}$$

$$\begin{array}{r} 18 \\ \times 882 \\ \hline \end{array}$$

$$\begin{array}{r} 18 \\ \times 1170 \\ \hline \end{array}$$

$$\begin{array}{r} 18 \\ \times 1044 \\ \hline \end{array}$$

$$\begin{array}{r} 18 \\ \times 1512 \\ \hline \end{array}$$

$$\begin{array}{r} 18 \\ \times 666 \\ \hline \end{array}$$

$$\begin{array}{r} 18 \\ \times 1692 \\ \hline \end{array}$$

36	6	1	
			34

49	7	1	
			45

64	8	1	
			63

81	9	1	
			69

36	6	1	
			57

49	7	1	
			70

64	8	1	
			104

81	9	1	
			80

36	6	1	
			90

49	7	1	
			100

64	8	1	
			55

81	9	1	
			99

36	6	1	
			71

49	7	1	
			91

64	8	1	
			154



Addition
Sumar

$$\begin{array}{r} 43 \\ + 20 \\ \hline \end{array} \quad \begin{array}{r} 43 \\ + 7 \\ \hline \end{array}$$

$$\begin{array}{r} 43 \\ + 28 \\ \hline \end{array} \quad \begin{array}{r} 33 \\ + 9 \\ \hline \end{array}$$

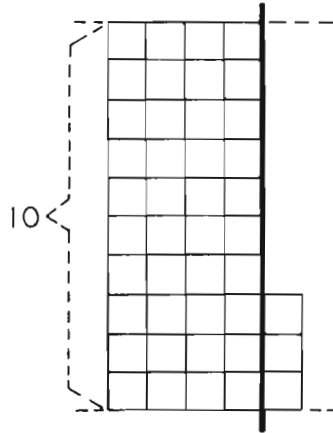
$$\begin{array}{r} 53 \\ + 13 \\ \hline \end{array} \quad \begin{array}{r} 43 \\ + 43 \\ \hline \end{array}$$

Subtraction
Restar

$$\begin{array}{r} 43 \\ - 13 \\ \hline \end{array} \quad \begin{array}{r} 43 \\ - 4 \\ \hline \end{array}$$

$$\begin{array}{r} 43 \\ - 14 \\ \hline \end{array} \quad \begin{array}{r} 73 \\ - 15 \\ \hline \end{array}$$

$$\begin{array}{r} 43 \\ - 18 \\ \hline \end{array} \quad \begin{array}{r} 53 \\ - 26 \\ \hline \end{array}$$



Total -----

0	1	2	3	4	5	6	7	8	9	10	11	12	13
$\times 5$	$\times 5$	$\times 5$	$\times 5$	$\times 5$	$\times 5$	$\times 5$	$\times 5$	$\times 5$	$\times 5$	$\times 5$	$\times 5$	$\times 5$	$\times 5$

5	10	15
$\times 5$	$\times 5$	$\times 5$

4	8	16
$\times 5$	$\times 5$	$\times 5$

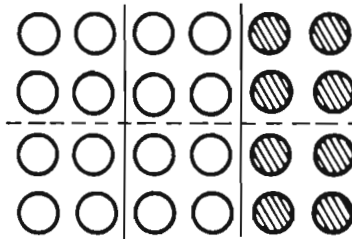
9	10	19
$\times 5$	$\times 5$	$\times 5$

7	14	28
$\times 5$	$\times 5$	$\times 5$

5 35	5 70	5 45	5 90
5 25	5 50	5 75	5 100
5 40	5 80	5 55	5 110



How do you feel?
¿Cómo se siente?



Total

$$\frac{1}{3} \text{ of } 24 = \text{-----}$$

$$\frac{2}{3} \times 24 = \text{-----}$$

$$\frac{1}{2} \times 24 = \text{-----}$$

$$\frac{3}{3} \times 24 = \text{-----}$$

1 W = 4 N

W	N
1	4
3	
	24
9	
	20

1 DOZ = 12 EGGS

DOZ.	EGGS
1	
3	36
$\frac{1}{2}$	
$\frac{1}{3}$	
$\frac{1}{6}$	

Addition
Sumas

$$\begin{array}{r} 100 \\ + 16 \\ \hline \end{array} \quad \begin{array}{r} 116 \\ + 30 \\ \hline \end{array}$$

$$\begin{array}{r} 116 \\ + 4 \\ \hline \end{array} \quad \begin{array}{r} 116 \\ + 54 \\ \hline \end{array}$$

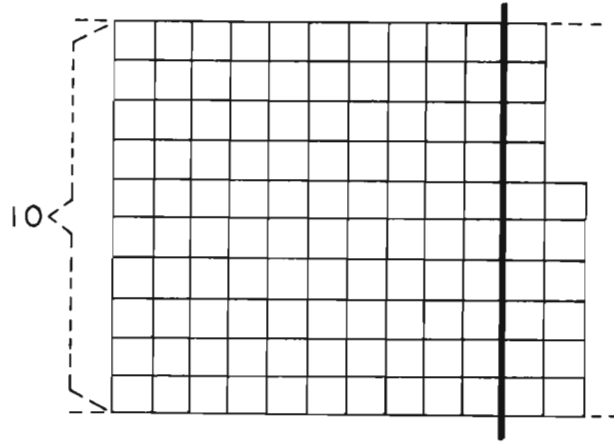
$$\begin{array}{r} 112 \\ + 18 \\ \hline \end{array} \quad \begin{array}{r} 125 \\ + 75 \\ \hline \end{array}$$

Subtraction
Diferencias

$$\begin{array}{r} 100 \\ - 10 \\ \hline \end{array} \quad \begin{array}{r} 116 \\ - 9 \\ \hline \end{array}$$

$$\begin{array}{r} 116 \\ - 16 \\ \hline \end{array} \quad \begin{array}{r} 116 \\ - 18 \\ \hline \end{array}$$

$$\begin{array}{r} 116 \\ - 20 \\ \hline \end{array} \quad \begin{array}{r} 116 \\ - 51 \\ \hline \end{array}$$



Total -----

0	1	2	3	4	5	6	7	8	9	10	11	12	13
$\times 6$	$\times 6$	$\times 6$	$\times 6$	$\times 6$	$\times 6$	$\times 6$	$\times 6$	$\times 6$	$\times 6$	$\times 6$	$\times 6$	$\times 6$	$\times 6$

4	10	14
$\times 6$	$\times 6$	$\times 6$

10	30	40
$\times 6$	$\times 6$	$\times 6$

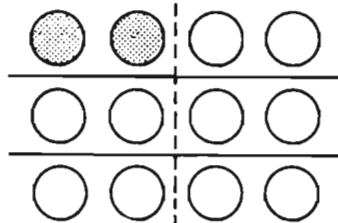
$6 \overline{)60}$	$6 \overline{)24}$	$6 \overline{)84}$	$6 \overline{)90}$
$6 \overline{)120}$	$6 \overline{)12}$	$6 \overline{)132}$	$6 \overline{)138}$
$6 \overline{)24}$	$6 \overline{)48}$	$6 \overline{)72}$	$6 \overline{)96}$

7	20	27
$\times 6$	$\times 6$	$\times 6$

8	9	17
$\times 6$	$\times 6$	$\times 6$



How do you feel?
¿Cómo se siente?



Total

$$\frac{1}{6} \text{ of } 12 = \text{-----}$$

$$\frac{3}{6} \times 12 = \text{-----}$$

$$\frac{5}{6} \times 12 = \text{-----}$$

$$\frac{1}{2} \times 12 = \text{-----}$$

$$1 \text{ (25¢)} = 5 \text{ (5¢)}$$

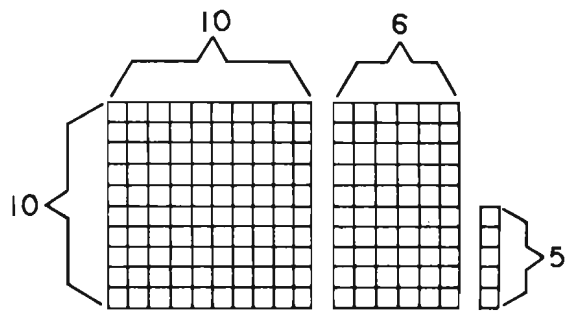
1 DOLLAR....
....100 CENTS

(25¢)	(5¢)
1	
3	
$\frac{1}{5}$	
$\frac{2}{5}$	
10	

dollars	cents
1	
$\frac{1}{2}$	
$\frac{1}{4}$	
$\frac{1}{10}$	
$3\frac{1}{100}$	

$$\begin{array}{r} 100 \\ + 65 \\ \hline \end{array}$$

$$\begin{array}{r} 165 \\ + 15 \\ \hline \end{array}$$



$$\begin{array}{r} 165 \\ - 60 \\ \hline \end{array}$$

$$\begin{array}{r} 165 \\ - 7 \\ \hline \end{array}$$

$$\begin{array}{r} 165 \\ + 300 \\ \hline \end{array}$$

$$\begin{array}{r} 165 \\ + 35 \\ \hline \end{array}$$

$$\begin{array}{r} 160 \\ - 55 \\ \hline \end{array}$$

$$\begin{array}{r} 160 \\ - 65 \\ \hline \end{array}$$

Total -----

$$\begin{array}{r} 165 \\ + 165 \\ \hline \end{array}$$

$$\begin{array}{r} 165 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 100 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 60 \\ \div 3 \\ \hline \end{array}$$

0	1	2	3	4	5	6	7	8	9	10	11	12	13
$\times 7$	$\times 7$	$\times 7$	$\times 7$	$\times 7$	$\times 7$	$\times 7$	$\times 7$	$\times 7$	$\times 7$	$\times 7$	$\times 7$	$\times 7$	$\times 7$

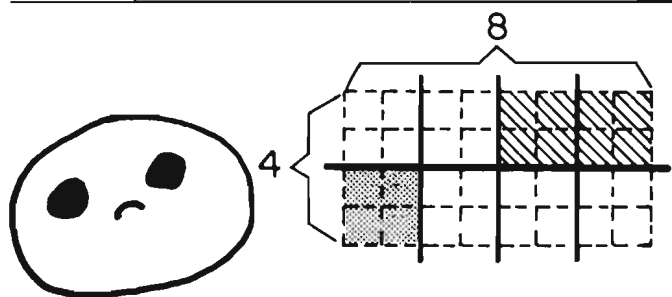
5	10	15
$\times 7$	$\times 7$	$\times 7$

10	20	30
$\times 7$	$\times 7$	$\times 7$

7 10	7 5	7 15	7 30
7 63	7 70	7 19	7 20
7 35	7 63	7 98	7 16

6	20	26
$\times 7$	$\times 7$	$\times 7$

4	8	16
$\times 7$	$\times 7$	$\times 7$



How do you feel?
¿Cómo se siente?

$$\frac{1}{8} \text{ of } 32 = \text{-----}$$

$$\frac{1}{4} \times 32 = \text{-----}$$

$$\frac{6}{8} \times 32 = \text{-----}$$

$$\frac{3}{4} \times 32 = \text{-----}$$

1 da. = 24 hr.

1 LB. → 32¢

da.	hr.
1	24
$\frac{1}{2}$	
$3\frac{1}{2}$	
$\frac{1}{6}$	
	28

LBS.	COST
1	32¢
3	¢
$\frac{1}{2}$	¢
	8¢
	4¢

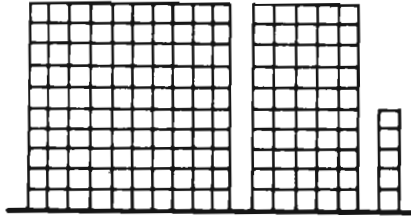
Addition

Sumar

$$\begin{array}{r} 155 \\ + 15 \\ \hline \end{array} \quad \begin{array}{r} 155 \\ + 45 \\ \hline \end{array}$$

$$\begin{array}{r} 155 \\ + 87 \\ \hline \end{array} \quad \begin{array}{r} 355 \\ + 355 \\ \hline \end{array}$$

$$\begin{array}{r} 155 \\ \times 2 \\ \hline \end{array} \quad \begin{array}{r} 355 \\ \times 2 \\ \hline \end{array}$$



Total 155

Subtraction

Restar

$$\begin{array}{r} 155 \\ - 9 \\ \hline \end{array} \quad \begin{array}{r} 155 \\ - 59 \\ \hline \end{array}$$

$$\begin{array}{r} 150 \\ - 80 \\ \hline \end{array} \quad \begin{array}{r} 150 \\ - 86 \\ \hline \end{array}$$

$$\begin{array}{r} 647 \\ - 155 \\ \hline \end{array} \quad \begin{array}{r} 626 \\ - 155 \\ \hline \end{array}$$

$\begin{array}{r} 0 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 1 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 2 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 6 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 9 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 10 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 11 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 12 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 13 \\ \times 8 \\ \hline \end{array}$
--	--	--	--	--	--	--	--	--	--	---	---	---	---

$\begin{array}{r} 7 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 10 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 17 \\ \times 8 \\ \hline \end{array}$
--	---	---

$\begin{array}{r} 8 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 16 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 32 \\ \times 8 \\ \hline \end{array}$
--	---	---

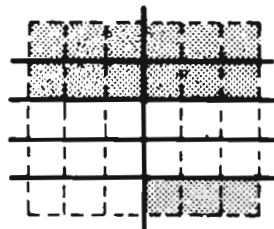
$8 \overline{)160}$	$8 \overline{)40}$	$8 \overline{)200}$	$8 \overline{)400}$
$8 \overline{)56}$	$8 \overline{)112}$	$8 \overline{)224}$	$8 \overline{)448}$
$8 \overline{)320}$	$8 \overline{)24}$	$8 \overline{)344}$	$8 \overline{)688}$

$\begin{array}{r} 20 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 30 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 40 \\ \times 8 \\ \hline \end{array}$
---	---	---

$\begin{array}{r} 30 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 9 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 39 \\ \times 8 \\ \hline \end{array}$
---	--	---



How do you feel?
¿Cómo se siente?



Total

$$\frac{1}{10} \text{ of } 30 = \text{-----}$$

$$\frac{2}{5} \times 30 = \text{-----}$$

$$\frac{1}{2} \times 30 = \text{-----}$$

$$\frac{2}{5} + \frac{1}{10} =$$

1 METER
10 DECIMETERS

M	dm
1	10
10	
$\frac{1}{2}$	
$\frac{1}{10}$	
$1\frac{3}{10}$	

$\frac{1}{2}$ OFF

P	$\frac{1}{2}$ P
30¢	15¢
\$1.50	¢
\$	\$2.50
72¢	¢
\$	\$7.25

Addition

Sumar

$$\begin{array}{r} 343 \\ +150 \\ \hline \end{array}$$

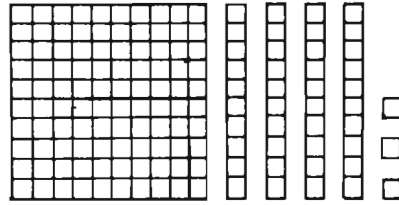
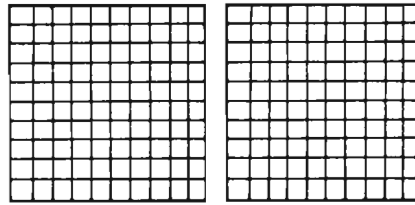
$$\begin{array}{r} 343 \\ +159 \\ \hline \end{array}$$

$$\begin{array}{r} 743 \\ +197 \\ \hline \end{array}$$

$$\begin{array}{r} 743 \\ +408 \\ \hline \end{array}$$

$$\begin{array}{r} 343 \\ 343 \\ +343 \\ \hline \end{array}$$

$$\begin{array}{r} 343 \\ \times 3 \\ \hline \end{array}$$



343

Subtraction

Restar

$$\begin{array}{r} 343 \\ -19 \\ \hline \end{array}$$

$$\begin{array}{r} 300 \\ -43 \\ \hline \end{array}$$

$$\begin{array}{r} 743 \\ -181 \\ \hline \end{array}$$

$$\begin{array}{r} 743 \\ -388 \\ \hline \end{array}$$

$$\begin{array}{r} 800 \\ -7 \\ \hline \end{array}$$

$$\begin{array}{r} 312 \\ \div 3 \\ \hline \end{array}$$

0	1	2	3	4	5	6	7	8	9	10	11	12	13
$\times 9$	$\times 9$	$\times 9$	$\times 9$	$\times 9$	$\times 9$	$\times 9$	$\times 9$	$\times 9$	$\times 9$	$\times 9$	$\times 9$	$\times 9$	$\times 9$

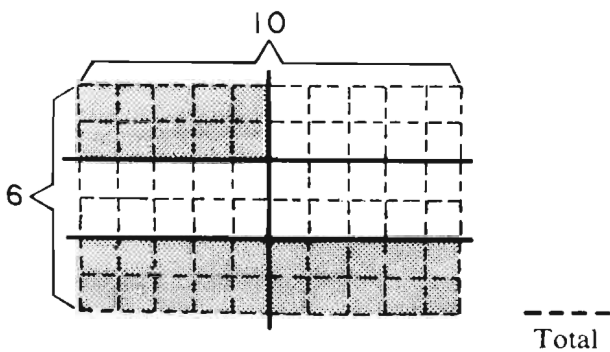
20	30	40
$\times 9$	$\times 9$	$\times 9$

5	25	50
$\times 9$	$\times 9$	$\times 9$

$9 \overline{)10}$	$9 \overline{)20}$	$9 \overline{)30}$	$9 \overline{)40}$
$9 \overline{)72}$	$9 \overline{)54}$	$9 \overline{)81}$	$9 \overline{)63}$
$9 \overline{)162}$	$9 \overline{)234}$	$9 \overline{)351}$	$9 \overline{)423}$

9	69	60
$\times 9$	$\times 9$	$\times 9$

12	24	48
$\times 9$	$\times 9$	$\times 9$



$$\frac{1}{3} \text{ of } \underline{60} = \text{---}$$

$$\frac{1}{2} \times \underline{60} = \text{---}$$

$$\frac{1}{6} \times \underline{60} = \text{---}$$

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

$\frac{1}{4}$ OFF

$\$1 = 10$ (10¢)

P	$\frac{3}{4}$ P
80¢	¢
\$12.00	\$
¢	30¢
\$1.60	\$
\$	\$6.00

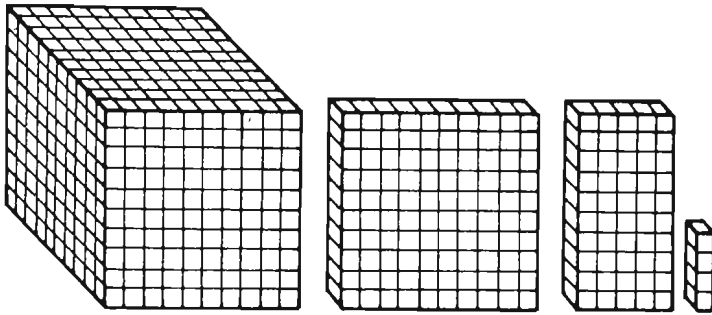
DOLLARS	dimes
2	
$\frac{1}{2}$	
$\frac{1}{10}$	



v-e,

"HOW MANY?"

"¿CUANTOS?"



$$\begin{array}{r} 100 \\ - 45 \\ \hline \end{array}$$

$$\begin{array}{r} 145 \\ - 50 \\ \hline \end{array}$$

$$\begin{array}{r} 145 \\ - 59 \\ \hline \end{array}$$

$$\begin{array}{r} 1,150 \\ - 725 \\ \hline \end{array}$$

$$\begin{array}{r} 1,154 \\ - 308 \\ \hline \end{array}$$

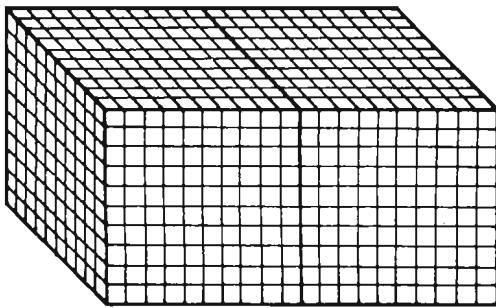
$$\begin{array}{r} 1,154 \\ - 1,092 \\ \hline \end{array}$$

Total -----

$$\begin{array}{r} 1,154 \\ + 1,154 \\ \hline \end{array}$$

$$\begin{array}{r} 1,154 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 1,154 \\ \div 2 \\ \hline \end{array}$$



Total

$$\begin{array}{r} 378 \\ - 109 \\ \hline \end{array}$$

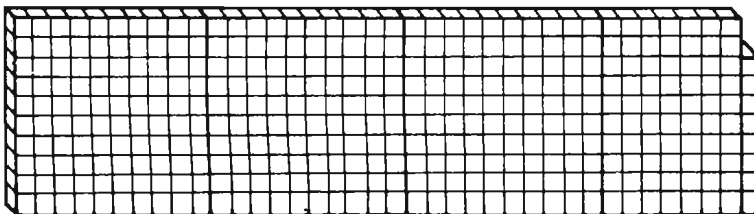
$$\begin{array}{r} 378 \\ - 287 \\ \hline \end{array}$$

$$\begin{array}{r} 378 \\ - 189 \\ \hline \end{array}$$

$$\begin{array}{r} 2,378 \\ - 1,349 \\ \hline \end{array}$$

$$\begin{array}{r} 2,378 \\ - 1,289 \\ \hline \end{array}$$

$$\begin{array}{r} 2,378 \\ - 1,419 \\ \hline \end{array}$$



$$\begin{array}{r} 2,378 \\ + 2,378 \\ \hline \end{array}$$

$$\begin{array}{r} 2,378 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 2,378 \\ \div 2 \\ \hline \end{array}$$

Please use the smallest whole numbers. Favor de usar los números más pequeños.

$$\begin{array}{r} 4 \quad 2 \quad 1 \\ \hline \square \quad \square \quad \square \end{array} \underline{5}$$

$$\begin{array}{r} 9 \quad 3 \quad 1 \\ \hline \square \quad \square \quad \square \end{array} \underline{23}$$

$$\begin{array}{r} 16 \quad 4 \quad 1 \\ \hline \square \quad \square \quad \square \end{array} \underline{49}$$

$$\begin{array}{r} 25 \quad 5 \quad 1 \\ \hline \square \quad \square \quad \square \end{array} \underline{89}$$

$$\begin{array}{r} 36 \quad 6 \quad 1 \\ \hline \square \quad \square \quad \square \end{array} \underline{67}$$

$$\begin{array}{r} 49 \quad 7 \quad 1 \\ \hline \square \quad \square \quad \square \end{array} \underline{125}$$

$$\begin{array}{r} 64 \quad 8 \quad 1 \\ \hline \square \quad \square \quad \square \end{array} \underline{100}$$

$$\begin{array}{r} 81 \quad 9 \quad 1 \\ \hline \square \quad \square \quad \square \end{array} \underline{200}$$

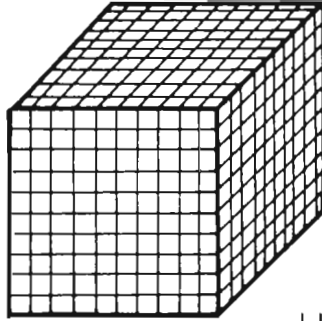
$$\begin{array}{r} 100 \quad 10 \quad 1 \\ \hline \square \quad \square \quad \square \end{array} \underline{376}$$



How do you feel?
¿Cómo se siente?

$$\begin{array}{r} 1,166 \\ + 108 \\ \hline \end{array}$$

$$\begin{array}{r} 166 \\ + 783 \\ \hline \end{array}$$



$$\begin{array}{r} 1,166 \\ - 159 \\ \hline \end{array}$$

$$\begin{array}{r} 1,166 \\ - 77 \\ \hline \end{array}$$

$$\begin{array}{r} 1,083 \\ + 83 \\ \hline \end{array}$$

$$\begin{array}{r} 1,166 \\ + 1,999 \\ \hline \end{array}$$

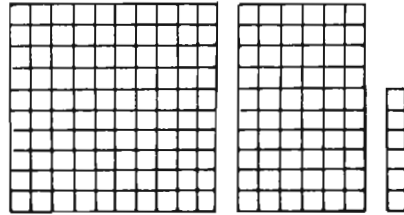
1,166.

$$\begin{array}{r} 2,166 \\ - 729 \\ \hline \end{array}$$

$$\begin{array}{r} 7,166 \\ - 1,598 \\ \hline \end{array}$$

$$\begin{array}{r} 166 \\ 166 \\ 166 \\ + 166 \\ \hline \end{array}$$

$$\begin{array}{r} 367 \\ 82 \\ 197 \\ + 56 \\ \hline \end{array}$$



$$\begin{array}{r} 1,166 \\ \div 2 \\ \hline \end{array}$$

$$\begin{array}{r} 1,166 \\ \times 2 \\ \hline \end{array}$$

$\frac{13}{\times 2}$	$\frac{13}{\times 3}$	$\frac{13}{\times 4}$	$\frac{13}{\times 5}$	$\frac{13}{\times 6}$	$\frac{13}{\times 7}$	$\frac{13}{\times 8}$	$\frac{13}{\times 9}$	$\frac{13}{\times 10}$	$\frac{13}{\times 20}$	$\frac{13}{30}$	$\frac{13}{\times 40}$	$\frac{13}{\times 50}$	$\frac{13}{\times 60}$
-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	------------------------	------------------------	-----------------	------------------------	------------------------	------------------------

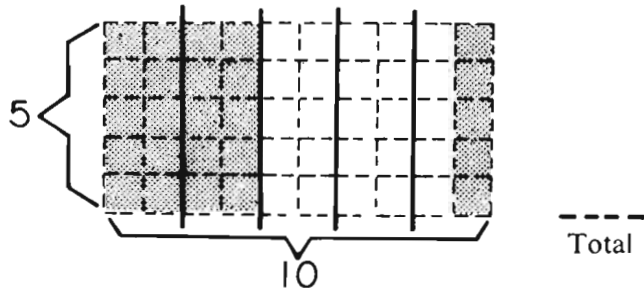
$$\begin{array}{r} 13 \\ \times 49 \\ \hline \end{array}$$

$$\begin{array}{r} 13 \\ \times 25 \\ \hline \end{array}$$

$$\begin{array}{r} 13 \\ \times 67 \\ \hline \end{array}$$

$$\begin{array}{r} 13 \\ \times 58 \\ \hline \end{array}$$

$6 \overline{)45}^R$	$7 \overline{)50}^R$	$8 \overline{)60}^R$	$9 \overline{)75}^R$
$6 \overline{)65}^R$	$7 \overline{)67}^R$	$8 \overline{)75}^R$	$9 \overline{)50}^R$
$6 \overline{)33}^R$	$7 \overline{)57}^R$	$8 \overline{)65}^R$	$9 \overline{)85}^R$



$$\frac{2}{5} \text{ of } \underline{50} = \text{---}$$

$$\frac{1}{2} \times \underline{50} = \text{---}$$

$$\frac{1}{10} \times \underline{50} = \text{---}$$

$$\frac{1}{10} + \frac{2}{5} = \text{---}$$

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

1 Hr...150miles

N	total
4¢	10¢
10¢	¢
	90¢
	\$ 1.50
50¢	\$

Hrs.	miles
$\frac{1}{2}$	75
$\frac{1}{5}$	
$1 \frac{1}{10}$	



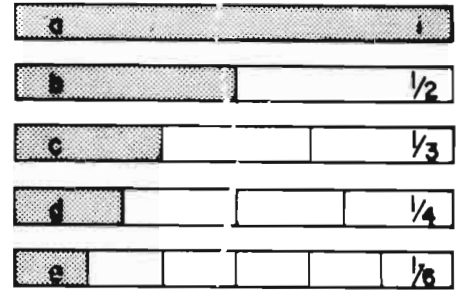
On Your Own (I)

$$\begin{array}{r} 37 \\ 37 \\ 37 \\ + 37 \\ \hline \end{array} \quad \textcircled{1}$$

$$\begin{array}{r} 100 \\ - 37 \\ \hline \end{array} \quad \textcircled{2}$$

$$\begin{array}{r} 37 \\ \times 12 \\ \hline \end{array} \quad \textcircled{3}$$

$$\begin{array}{r} 23 \\ \times 46 \\ \hline \end{array} \quad \textcircled{4}$$



Please circle the letter after the line you think will be the best "estimate."

12 x 12

- 10 x 10 A.
 - 10 x 15 B.
 - 10 x 20 C.
- ⑧**

15 x 15

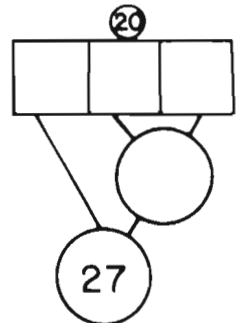
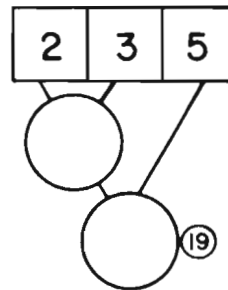
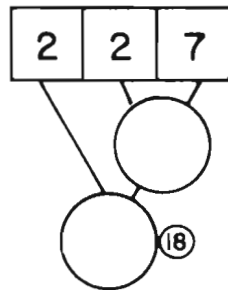
- 10 x 10 D.
 - 10 x 20 E.
 - 20 x 20 F.
- ⑨**

$$\frac{a - 3d}{\vdots - \frac{3}{4}} = \text{---} \quad \textcircled{5}$$

$$\frac{b + d}{+} = \text{---} \quad \textcircled{6}$$

$$\frac{2c - e}{-} = \text{---} \quad \textcircled{7}$$

- 2 x 5 = _____ **⑩**
- 10 x 5 = _____ **⑪**
- 5 x 20 = _____ **⑫**
- 10 x 20 = _____ **⑬**
- 10 x 50 = _____ **⑭**
- 20 x 50 = _____ **⑮**
- 2 x 500 = _____ **⑯**
- 10 x 500 = _____ **⑰**



100%	50%	25%	10%	5%
60	30	⑳	㉒	㉓
100	㉔	25	㉕	㉖
50	㉗	㉘	5	㉙

1 doz. = 12 eggs

doz.	eggs
2	4
+ 1	11
<hr/>	

⑳

doz.	eggs
3	3
- 1	10
<hr/>	

㉑



How do you feel?

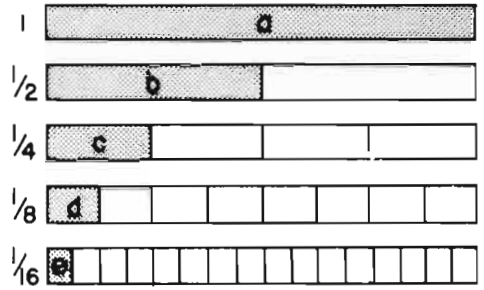
On Your Own (II)

$$\begin{array}{r} 185 \\ 185 \\ + 185 \\ \hline \end{array}$$

$$5 \overline{)215}$$

$$23 \overline{)1035}$$

$$3 \times \$1.50 = \$$$



Please circle the letter after the line you think will be the best "estimate."

$$\boxed{96 \div 23}$$

$$\boxed{234 \div 18}$$

$$\underline{90 \div 30} \quad \text{A.}$$

$$\underline{240 \div 20} \quad \text{D.}$$

$$\underline{100 \div 20} \quad \text{B.}$$

$$\underline{300 \div 15} \quad \text{E.}$$

$$\underline{100 \div 25} \quad \text{C.}$$

$$\underline{200 \div 20} \quad \text{F.}$$

$$\frac{c + 2d}{+} =$$

$$\frac{3e + 3e}{+} =$$

$$\frac{a - 3d}{-} =$$

$$\underline{8 \times 10} =$$

$$\underline{80 \times 10} =$$

$$\underline{8 \times 100} =$$

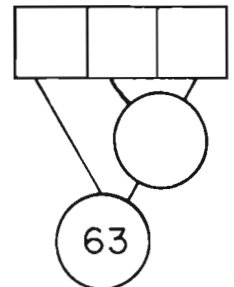
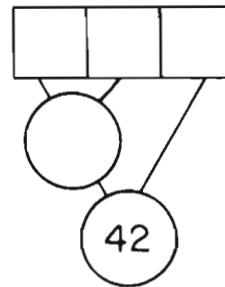
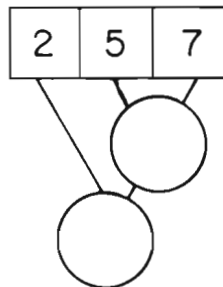
$$\underline{8 \times 50} =$$

$$\underline{80 \times 50} =$$

$$\underline{5 \times 800} =$$

$$\underline{50 \times 800} =$$

$$\underline{80 \times 500} =$$



100%	50%	150%	25%	200%
\$ 400	\$	\$	\$	\$
\$ 300	\$	\$	\$	\$
\$ 50	\$	\$	\$	\$

1 week = 7 days

$$\begin{array}{r|l} \text{wk.} & \text{da.} \\ \hline 1 & 6 \\ + 2 & 4 \\ \hline & \end{array} \quad \begin{array}{l} \text{--- da.} \\ \text{--- da.} \\ \text{=== da.} \\ \text{--- da.} \end{array}$$

$$\begin{array}{r|l} \text{wk.} & \text{da.} \\ \hline 3 & 0 \\ - 1 & 5 \\ \hline & \end{array} \quad \begin{array}{l} \text{--- da.} \\ \text{--- da.} \\ \text{=== da.} \\ \text{--- da.} \end{array}$$



How do you feel?

On Your Own (III)

$$\begin{array}{r} 175 \\ + 392 \\ \hline \end{array}$$

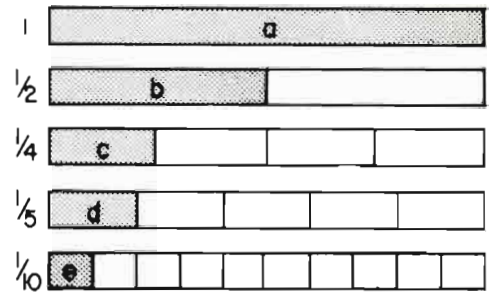
$$\begin{array}{r} 37 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} 37 \\ \times 12 \\ \hline \end{array}$$

$$\begin{array}{r} 101 \\ \times 63 \\ \hline \end{array}$$

$$\begin{array}{r} 750 \\ - 195 \\ \hline \end{array}$$

$$\begin{array}{r} 148 \\ \times 6 \\ \hline \end{array}$$



Please circle the letter after the line you think will be the best "estimate."

18 x 21

25 x 25

$$\frac{20 \times 23}{\text{A}}$$

$$\frac{20 \times 30}{\text{D}}$$

$$\frac{20 \times 20}{\text{B}}$$

$$\frac{20 \times 25}{\text{E}}$$

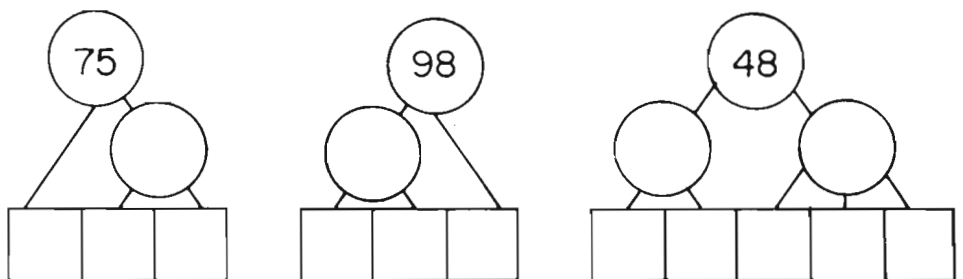
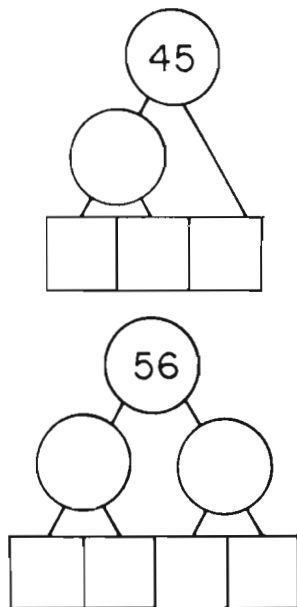
$$\frac{15 \times 20}{\text{C}}$$

$$\frac{30 \times 30}{\text{F}}$$

$$\frac{b - e}{-} = \underline{\hspace{2cm}}$$

$$\frac{2d + e}{+} = \underline{\hspace{2cm}}$$

$$\frac{3e + e}{+} = \underline{\hspace{2cm}}$$



100 %	2 %	5 %	102 %	105 %
\$ 1.00	\$	\$	\$	\$
\$ 100	\$	\$	\$	\$
\$ 50	\$	\$	\$	\$



How do you feel?

1 pound (lb.) = 16 ounces (oz.)

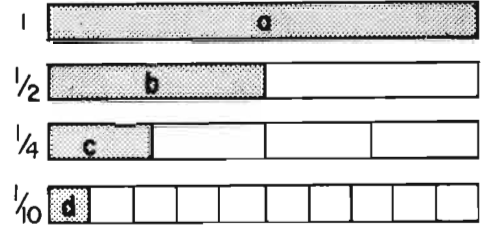
lb.	oz.	
3	0	oz.
- 1	13	oz.
		oz.

lb.	oz.	
2	5	oz.
	x 4	x 4
		oz.

On Your Own (IV)

$$\begin{array}{r} 2468 \\ 2468 \\ 2468 \\ +2468 \\ \hline \end{array} \qquad \begin{array}{r} 123 \\ \times 4 \\ \hline \end{array}$$

$$4 \overline{)728} \qquad 18 \overline{)666}$$



Please circle the letter after the line you think will be the best "estimate."

$$\boxed{329 \div 17}$$

$$\boxed{275 \div 28}$$

$$\underline{300 \div 15} \quad \text{A.}$$

$$\underline{300 \div 25} \quad \text{D.}$$

$$\underline{300 \div 20} \quad \text{B.}$$

$$\underline{240 \div 30} \quad \text{E.}$$

$$\underline{350 \div 15} \quad \text{C.}$$

$$\underline{250 \div 25} \quad \text{F.}$$

$$\begin{array}{r} a - 3c = \underline{\hspace{2cm}} \\ - = \underline{\hspace{2cm}} \end{array}$$

$$\begin{array}{r} 3d + 2d = \underline{\hspace{2cm}} \\ + = \underline{\hspace{2cm}} \end{array}$$

$$\begin{array}{r} 7d + 3d = \underline{\hspace{2cm}} \\ + = \underline{\hspace{2cm}} \end{array}$$

$$4 \times 5 = \underline{\hspace{2cm}}$$

$$4 \times 50 = \underline{\hspace{2cm}}$$

$$40 \times 50 = \underline{\hspace{2cm}}$$

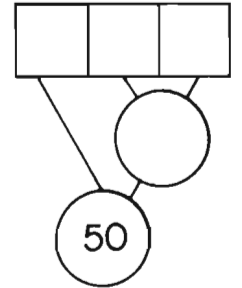
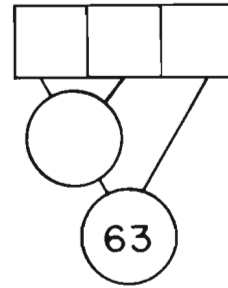
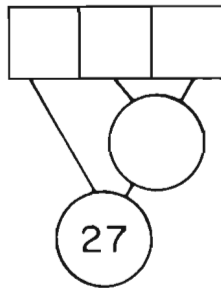
$$4 \times 25 = \underline{\hspace{2cm}}$$

$$40 \times 25 = \underline{\hspace{2cm}}$$

$$4 \times 250 = \underline{\hspace{2cm}}$$

$$40 \times 500 = \underline{\hspace{2cm}}$$

$$40 \times 250 = \underline{\hspace{2cm}}$$



100 %	50 %	125 %	10 %	150 %
\$ 500	\$	\$	\$	\$
\$ 10	\$	\$	\$	\$
\$ 400	\$	\$	\$	\$

1 yard = 3 feet

1 foot = 12 inches

yd.	ft.	in.	
		10	in.
+			in.
<hr/>			in.



How do you feel?

yd.	ft.	in.	
		7	in.
<hr/>			in.
x 2			x 2
<hr/>			in.

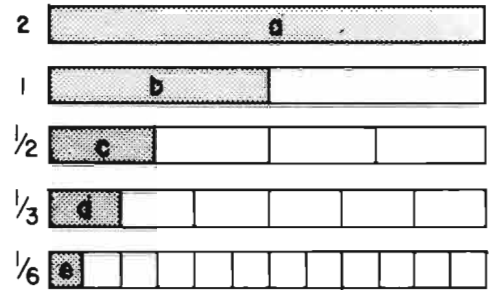
On Your Own

$$\begin{array}{r} 357 \\ + 246 \\ \hline \end{array}$$

$$\begin{array}{r} 753 \\ - 468 \\ \hline \end{array}$$

$$\begin{array}{r} 182 \\ \times 8 \\ \hline \end{array}$$

$$\begin{array}{r} 112 \\ \times 13 \\ \hline \end{array}$$



Please circle the letter after the line you think will be the best "estimate."

$$\boxed{35 \times 75}$$

$$\underline{30 \times 80} \quad \text{A.}$$

$$\underline{40 \times 80} \quad \text{B.}$$

$$\underline{30 \times 70} \quad \text{C.}$$

$$\boxed{27 \times 54}$$

$$\underline{25 \times 55} \quad \text{D.}$$

$$\underline{25 \times 50} \quad \text{E.}$$

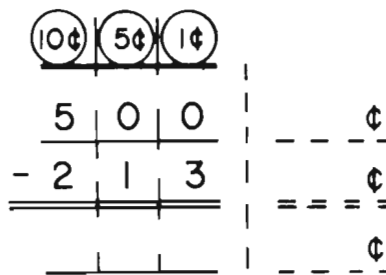
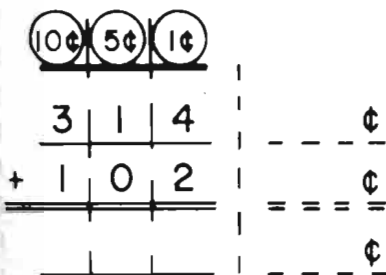
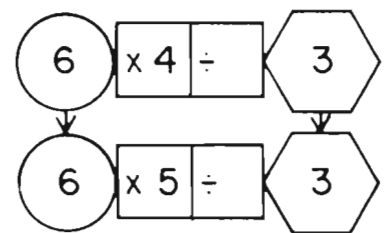
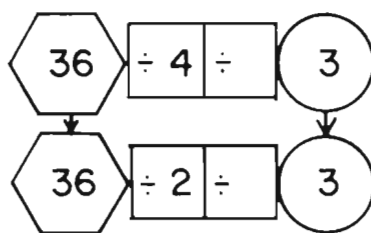
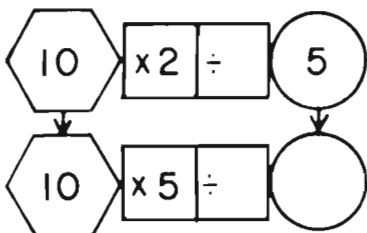
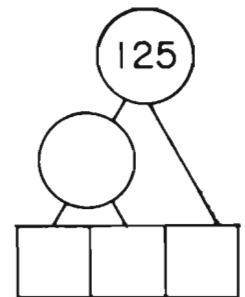
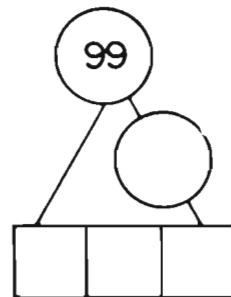
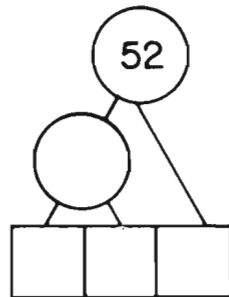
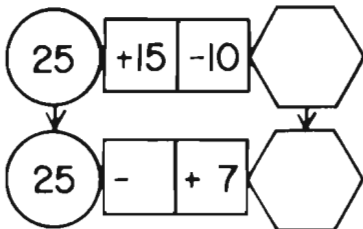
$$\underline{30 \times 50} \quad \text{F.}$$

$$\frac{b + d}{=} = \underline{\hspace{2cm}}$$

$$\frac{4e - d}{=} = \underline{\hspace{2cm}}$$

$$\frac{b \div 3}{=} = \underline{\hspace{2cm}}$$

Equal Chain Reactions



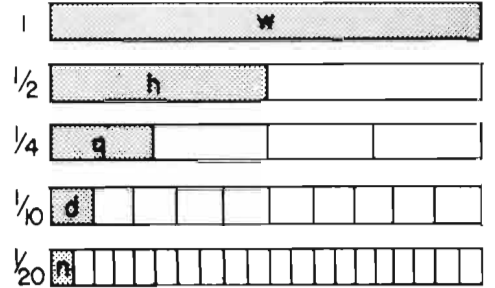
How do you feel?

On Your Own (VI)

$$\begin{array}{r} 727 \\ \times \quad 9 \\ \hline \end{array}$$

$$\begin{array}{r} 148 \\ 148 \\ 148 \\ 148 \\ + 148 \\ \hline \end{array}$$

$$\begin{array}{r} 185 \\ \times 24 \\ \hline \end{array}$$



Please circle the letter after the line you think will be the best "estimate."

$$\boxed{575 \div 35}$$

$$\underline{500 \div 40} \quad \text{A.}$$

$$\underline{600 \div 40} \quad \text{B.}$$

$$\underline{600 \div 30} \quad \text{C.}$$

$$\boxed{2511 \div 55}$$

$$\underline{3000 \div 50} \quad \text{D.}$$

$$\underline{2000 \div 50} \quad \text{E.}$$

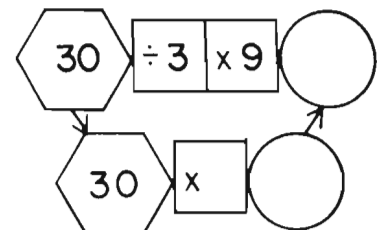
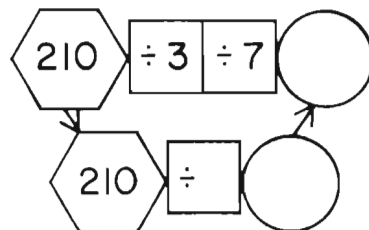
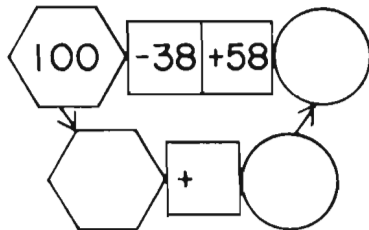
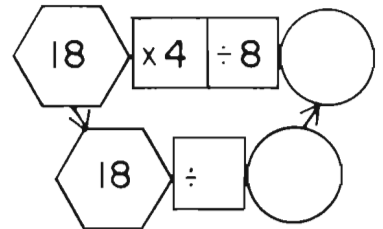
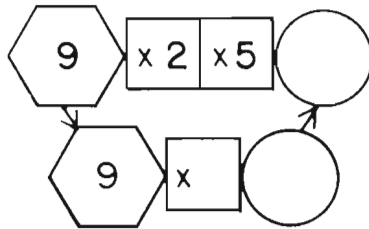
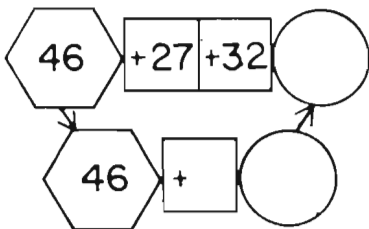
$$\underline{2000 \div 60} \quad \text{F.}$$

$$\begin{array}{r} 3h - 3q = \underline{\quad} \\ - \quad \quad = \quad \end{array}$$

$$\begin{array}{r} 2w - 7d = \underline{\quad} \\ - \quad \quad = \quad \end{array}$$

$$\begin{array}{r} 3h \div 15 = \underline{\quad} \\ \div 15 = \quad \end{array}$$

Chain Reactions . . . and Shortcuts



How do you feel?

$$\begin{array}{r} \textcircled{25c} \textcircled{5c} \textcircled{1c} \\ \hline 4 \mid 0 \mid 0 \\ - 1 \mid 4 \mid 2 \\ \hline \end{array} \quad \begin{array}{l} \text{---} \text{¢} \\ \text{---} \text{¢} \\ \text{---} \text{¢} \end{array}$$

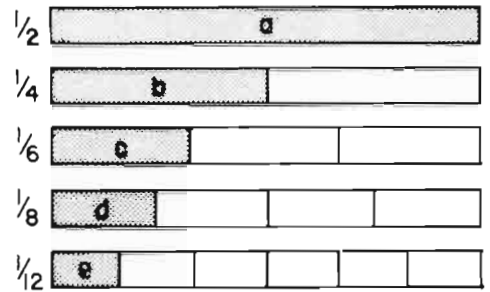
$$\begin{array}{r} \textcircled{25c} \textcircled{5c} \textcircled{1c} \\ \hline 2 \mid 3 \mid 4 \\ \quad \times 3 \\ \hline \end{array} \quad \begin{array}{l} \text{---} \text{¢} \\ \text{---} \text{¢} \\ \text{---} \text{¢} \end{array}$$

On Your Own (VII)

$$\begin{array}{r} 1000 \\ - 392 \\ \hline \end{array}$$

$$\begin{array}{r} 148,296 \\ 148,296 \\ + 148,296 \\ \hline \end{array}$$

$$\begin{array}{r} 296 \\ \times 75 \\ \hline \end{array}$$



Please circle the letter after the line you think will be the best "estimate".

64 x 66

- 60 x 60 A.
- 70 x 70 B.
- 70 x 60 c.

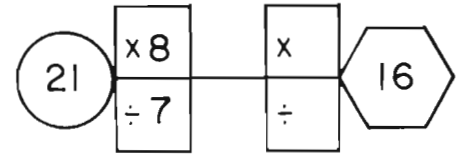
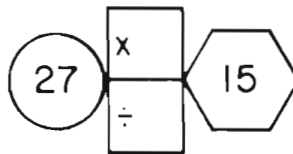
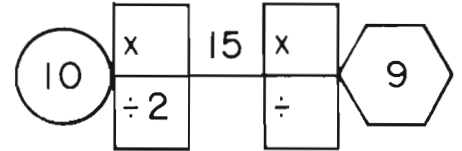
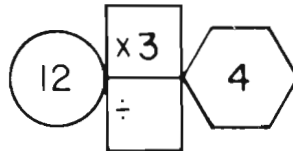
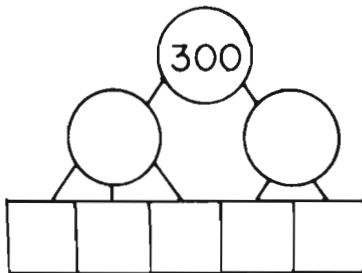
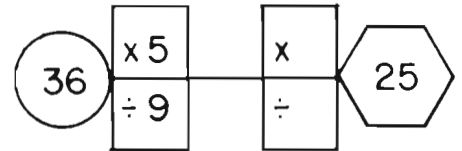
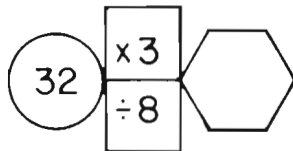
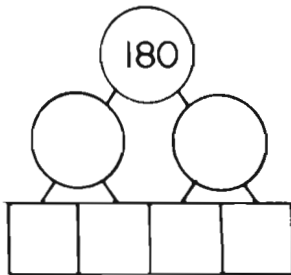
349 x 25

- 350 x 30 D.
- 300 x 20 E.
- 400 x 20 F.

$$\frac{b - c}{-} = \frac{\quad}{\quad}$$

$$\frac{a - 2d}{-} = \frac{\quad}{\quad}$$

$$\frac{b \times \frac{1}{2}}{\times \frac{1}{2}} = \frac{\quad}{\quad}$$



1 gross = 12 doz.

1 dozen = 12 eggs

gr.	doz.	eggs	
1	7	9	e.
+	3	8	2
-----			===== e.
-----			----- e.



How do you feel?

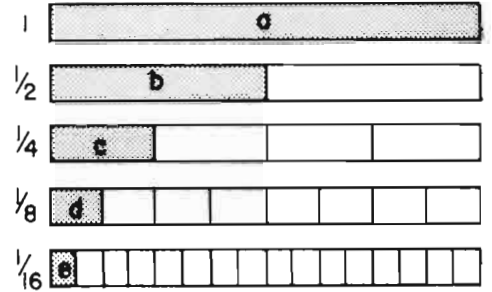
g.	d.	e.	
7	10	0	e.
-----			===== e.
-----			----- e.

On Your Own (VIII)

$$\begin{array}{r} 1738 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 1305 \\ - 879 \\ \hline \end{array}$$

$$35 \overline{) 5110}$$



Please circle the letter after the line you think will be the best "estimate".

$$\boxed{4500 \div 66}$$

$$\underline{4200 \div 70} \quad \text{A.}$$

$$\underline{4200 \div 60} \quad \text{B.}$$

$$\underline{4800 \div 60} \quad \text{C.}$$

$$\boxed{8513 \div 125}$$

$$\underline{8500 \div 100} \quad \text{D.}$$

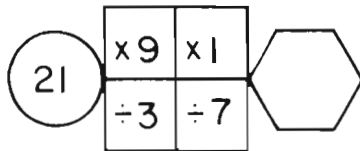
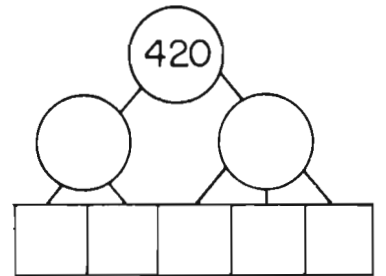
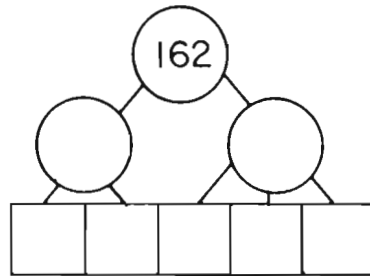
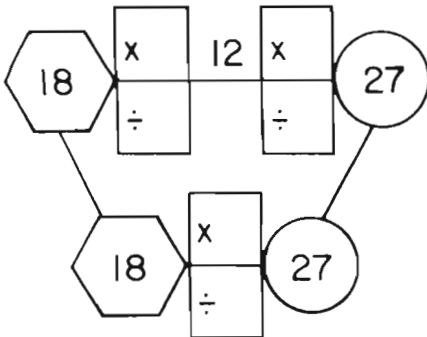
$$\underline{9000 \div 100} \quad \text{E.}$$

$$\underline{8000 \div 100} \quad \text{F.}$$

$$\frac{1}{4} \times b = \underline{\hspace{2cm}}$$

$$\frac{3}{4} \times c = \underline{\hspace{2cm}}$$

$$\frac{1}{2} \times 5d = \underline{\hspace{2cm}}$$



	100 %	10 %	5 %	110 %	205 %
\$ 10.00	\$	\$	\$	\$	\$
\$ 5.00	\$	\$	\$	\$	\$
\$ 15.00	\$	\$	\$	\$	\$

1 hour = 60 minutes

h.	m.	s.		
1	30	45	s.	
+	1	30	15	s.
<hr/>			s.	
<hr/>			s.	

1 minute = 60 seconds

h.	m.	s.	
1	0	0	s.
-	9	48	s.
<hr/>			s.
<hr/>			s.

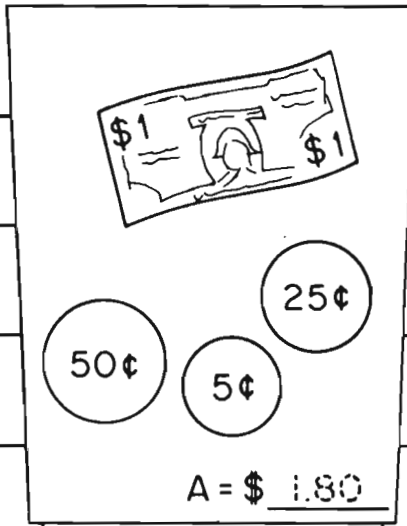


How do you feel?



How do you feel?
¿Cómo se siente?

$A + 20¢$	\$
$A - 37¢$	\$
$A + \$1.25$	\$
$2A$	\$



$\frac{1}{2} A$	\$
$\$5.00 - A$	\$
$\frac{1}{3} A$	\$
$25\% \times A$	\$

$\begin{array}{r} 6 \\ + 9 \\ \hline \end{array}$	$\begin{array}{r} 2 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 20 \\ - 8 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ \times 7 \\ \hline \end{array}$
$\begin{array}{r} 4 \\ \times 6 \\ \hline \end{array}$	$\begin{array}{r} 15 \\ - 7 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ \times 4 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ + 5 \\ \hline \end{array}$

$30 \times 20 = \underline{\hspace{2cm}}$

$50 \times 40 = \underline{\hspace{2cm}}$

$(3 \times 9) - (4 \times 6) = \underline{\hspace{2cm}}$

$(5 \times 8) - (7 \times 4) = \underline{\hspace{2cm}}$

$24 \div 3 = \underline{\hspace{2cm}}$

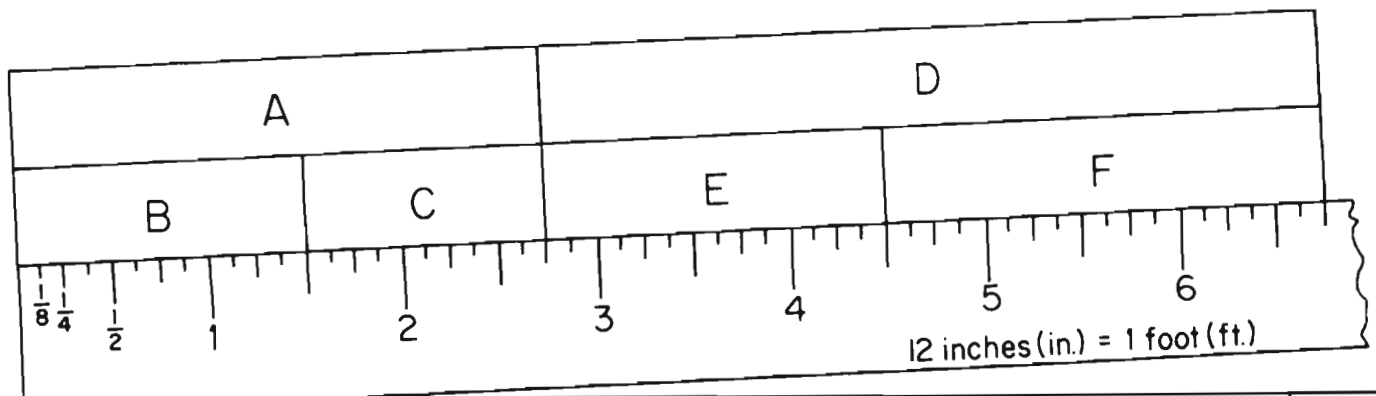
$7 + 9 = \underline{\hspace{2cm}}$

$28 \div 7 = \underline{\hspace{2cm}}$

$13 - 5 = \underline{\hspace{2cm}}$

$\frac{1}{2} + \frac{1}{4} = \underline{\hspace{2cm}}$

$\frac{2}{3} - \frac{1}{3} = \underline{\hspace{2cm}}$



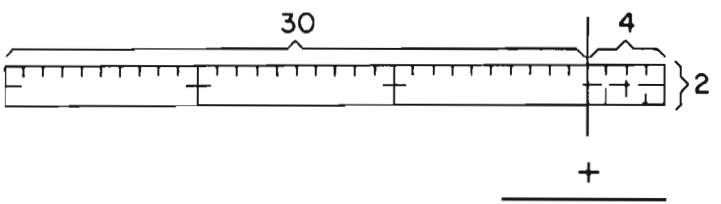
$\frac{1}{2}$ ft.	6 in.	B	$1\frac{1}{2}$ in.	F	in.
$\frac{1}{4}$ ft.	in.	C	in.	A	in.
$\frac{2}{3}$ ft.	in.	E	in.	D	in.

**SPEED
LIMIT
55 m.p.h.**
S = ___ m.p.h.

2S	miles	S-18	m.p.h.
S-30 m.p.h.	m.p.h.	S-13	m.p.h.
6 × (S-5)	miles	S-35	miles
$1\frac{1}{2}S$	miles	50% × S	m.p.h.



How do you feel?
¿Cómo se siente?



$\begin{array}{r} 17 \\ + 8 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ \times 9 \\ \hline \end{array}$	$6 \overline{)42}$	
$\begin{array}{r} 9 \\ \times 4 \\ \hline \end{array}$	$6 \overline{)48}$	$\begin{array}{r} 23 \\ + 29 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ \times 7 \\ \hline \end{array}$
$5 \overline{)30}$	$\begin{array}{r} 50 \\ - 32 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ \times 5 \\ \hline \end{array}$	$\begin{array}{r} 45 \\ - 17 \\ \hline \end{array}$

$$\begin{array}{r} 34 \\ \times 2 \\ \hline \end{array} \quad \begin{array}{r} 34 \\ \times 3 \\ \hline \end{array} \quad \begin{array}{r} 34 \\ 2 \overline{)34} \\ \hline \end{array}$$

$(7 \times 7) - (5 \times 6) = \underline{\hspace{2cm}}$

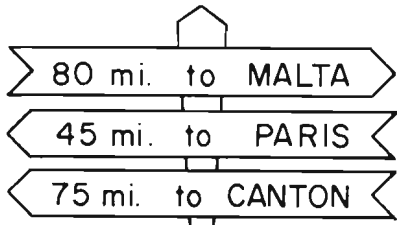
$(6 \times 6) - (3 \times 9) = \underline{\hspace{2cm}}$

$10 \times 850 = \underline{\hspace{2cm}}$ $20 \times 50 = \underline{\hspace{2cm}}$

$\frac{1}{2} = \frac{\hspace{1cm}}{6}$ $\frac{1}{4} = \frac{\hspace{1cm}}{12}$ $\frac{3}{4} = \frac{\hspace{1cm}}{12}$

T = ___ : ___ p.m.

T + 45 min.	: p.m.
T - (1 hr. + 20 min.)	: p.m.
T + $1\frac{1}{2}$ hrs.	: p.m.
25% × 60 min.	min.
T + 12 hrs.	: a.m.



C at 50 m.p.h.	hrs.	2M	miles	$C - P$	miles
				$P + M$	miles
				$\frac{2}{3} \times P$	miles
				$50\% \times M$	miles
				$2 \times (P + M)$	miles



How do you feel?
¿Cómo se siente?

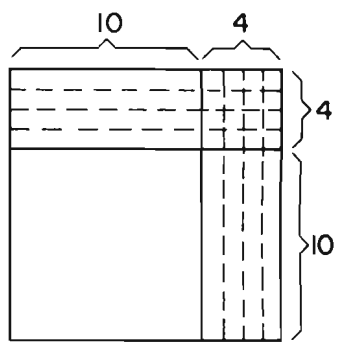
$\begin{array}{r} 9 \\ 8 \\ + 6 \\ \hline \end{array}$	$\begin{array}{r} 9 \\ \times 8 \\ \hline \end{array}$	$8 \overline{)56}$
$\begin{array}{r} 100 \\ - 65 \\ \hline \end{array}$	$\begin{array}{r} 17 \\ 17 \\ + 17 \\ \hline \end{array}$	$7 \overline{)63}$

$(8 \times 7) - (5 \times 9) = \underline{\hspace{2cm}}$

$\$2.10 \div 3 = \$ \underline{\hspace{2cm}}$

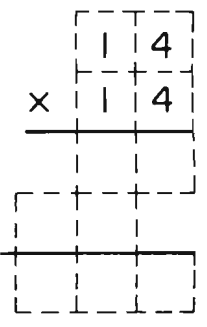
$\$2.10 \times 10 = \$ \underline{\hspace{2cm}}$

$100 \times 500 = \underline{\hspace{2cm}}$



$\frac{6}{4} = \frac{\quad}{2}$ $\frac{6}{9} = \frac{\quad}{3}$ $\frac{1}{4} = \frac{\quad}{12}$

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



Sale

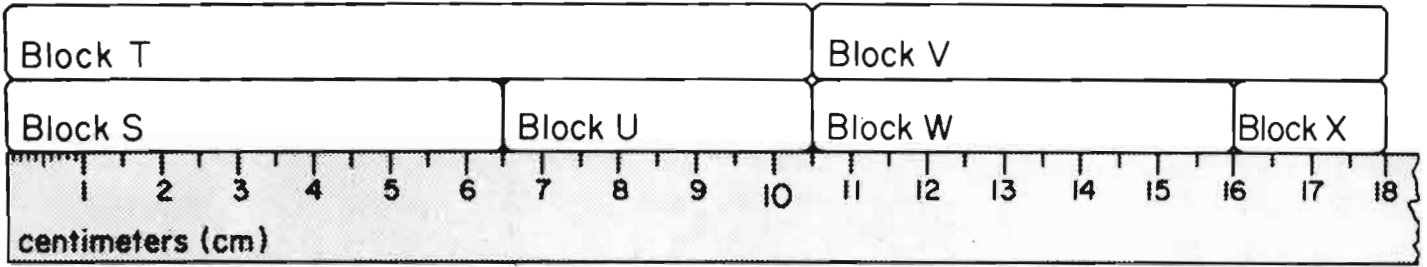
Tiles 24¢

Aluminum Strips 40¢

Paint 1 quart \$1.20

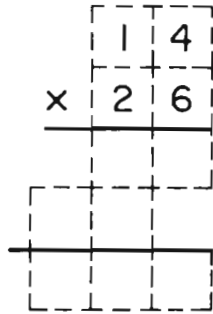
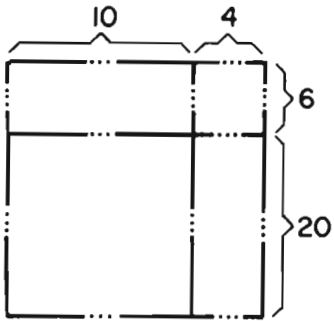
25% or $\frac{1}{4}$ off

	Sale Price		Sale Price
10 Tiles	\$1.80	20 Aluminum Strips	\$
8 Aluminum Strips	\$	$2\frac{1}{2}$ quarts Paint	\$
4 quarts Paint	\$	100 Tiles	\$
30 Tiles	\$	3 quarts Paint	\$

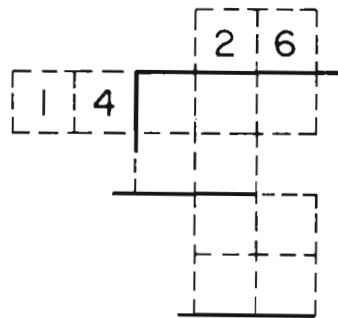
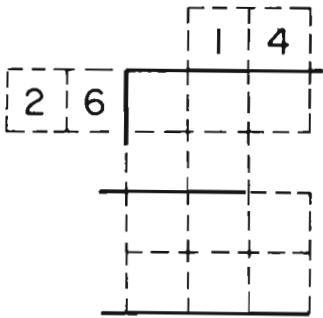


How do you feel?
¿Cómo se siente?

U	cm	W	cm	S + U	cm
W + X	cm	T + V	cm	U + W + X	cm



12	41	23	57	69
12	41	23	57	69
12	41	23	57	69
<u>+ 12</u>	<u>+ 41</u>	<u>+ 23</u>	<u>+ 57</u>	<u>+ 69</u>



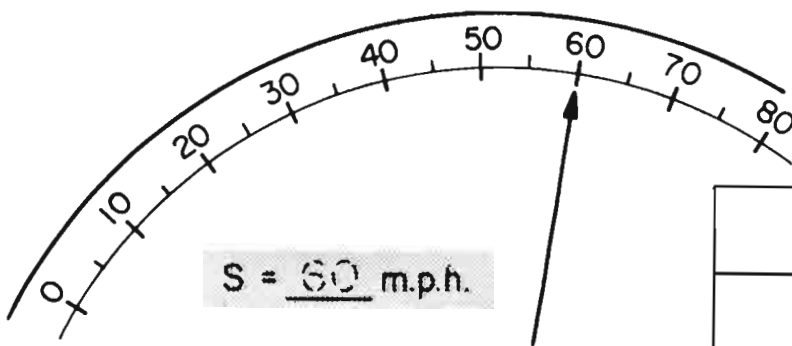
$4 \times 800 = \underline{\quad}$ $60 \times 50 = \underline{\quad}$

$(\quad \times 8) - (\quad \times 6) = 10$

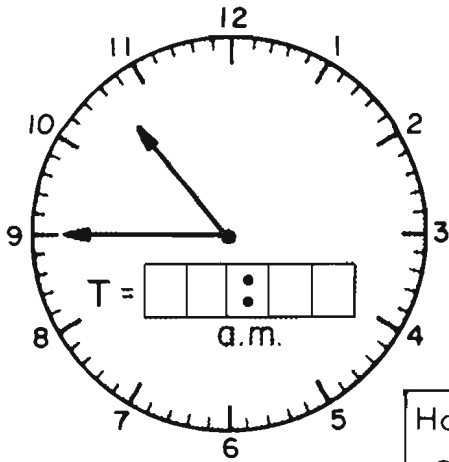
$\frac{2}{3} = \frac{\quad}{6}$ $\frac{1}{8} = \frac{\quad}{32}$ $|\frac{1}{4} = \frac{\quad}{4}$

$\frac{5}{8} + \frac{1}{4} = \frac{\quad}{8} + \frac{\quad}{8} = \frac{\quad}{8}$

$\frac{5}{6} - \frac{1}{3} = \frac{\quad}{6} - \frac{\quad}{6} = \frac{\quad}{6} = \underline{\quad}$



$\frac{3}{4} \times S$	miles	$S - 55$	miles
$\frac{1}{3} \times 45 \text{ miles}$	miles	$S - (\frac{1}{3} \times S)$	m.p.h.
		$(2 \times S) + (\frac{1}{2} \times S)$	miles
		$S - 18$	m.p.h.



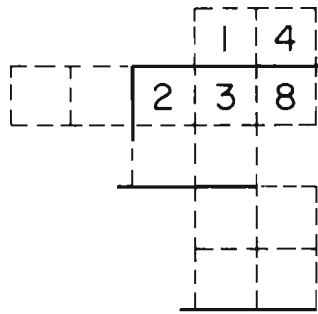
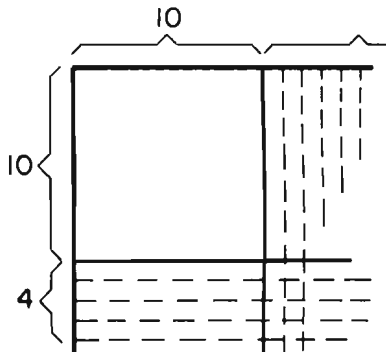
How many minutes in 2 hours?
 ¿Cuántos minutos hay en 2 horas? min.

2 hours after time shown.
 2 horas después de la hora indicada. p.m.

$T + 2\frac{1}{2}$ hrs. :

How many minutes since mid-night?
 ¿Cuántos minutos han pasado desde la medianoche? min.

Time Shown : $T + 11$ hrs. :



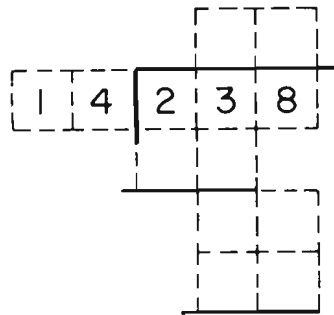
$\underline{\quad} \times \underline{\quad} = 238$

$(7 \times \quad) - (\quad \times 6) = 1$

$(\quad \times 8) - (9 \times \quad) = 1$

$60 \times 90 = \underline{\quad}$ $200 \times 50 = \underline{\quad}$

$30 \times 800 = \underline{\quad}$ $100 \times 100 = \underline{\quad}$



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

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

$\frac{9}{4} = 2\frac{\quad}{4}$

$1\frac{11}{6} = 2\frac{\quad}{6}$

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

$\frac{1}{2} + \frac{3}{4} = \frac{\quad}{4} + \frac{\quad}{4} = \frac{\quad}{4} = \boxed{\quad}^*$

How do you feel?
 ¿Cómo se siente?

150	1¢	_____	10¢
1.70	\$ 1	_____	10¢
35	1¢	_____	10¢
789	1¢	_____	\$ 1

\$ 1	10¢	1¢
15 = 150 = 1500		
1 = 10 = 100		
.1 = 1 = 10		
.01 = .1 = 1		
1.8 = 18 = 180		
.5 = 5 = 50		
.07 = .7 = 7		

125	10¢	_____	\$ 1
.7	\$ 1	_____	10¢
1.3	\$ 1	_____	1¢
4.5	10¢	_____	\$ 1

<i>Sale</i> - 10% off prices shown	Jackets Chaquetas	Shirts Faldas	Sweaters Suéteres	Ties Corbatas
	\$ 6.00	\$ 8.00	\$ 5.50	\$ 1.40

On Your Own

Usted Solo

Jackets Chaquetas	2	1	0	0			1	1
Shirts Faldas	0	0	0	0		1		1
Sweaters Suéteres	0	0	3	0	1	1	3	1
Ties Corbatas	0	1	0	7	2			1
Total Sale Price	\$	\$	\$	\$	\$	\$	\$	\$

20
3

$\times \begin{array}{r} 23 \\ \hline 966 \end{array}$

$\underline{\hspace{1cm}} + \hspace{1cm} = 966$

$$(6 \times \quad) - (\quad \times 7) = 1$$

$$\quad \times 9) - (\quad \times 8) = 7$$

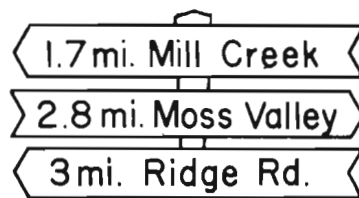
$$\frac{1}{2} - \frac{1}{5} = \text{---} = \text{---}$$

$$\frac{7}{10} + \frac{4}{5} = \text{---} + \text{---} = \text{---} = \boxed{\quad}^*$$

$$|\frac{1}{10} - \frac{3}{5} = \text{---} = \text{---} = \boxed{\quad}^*$$

$\begin{array}{r} 23 \\ \hline 966 \end{array}$

$\begin{array}{r} 23 \\ \hline 966 \end{array}$



$2 \times A$	mi.			
$A + B$	mi.			
$B + A + A$	mi.			
$2 \times B$	mi.			
$2(A + B)$	mi.	$B + C$	mi.	$C - A$ mi.

$A = 1.7 \text{ mi.}$

$B = 2.8 \text{ mi.}$

$C = 3 \text{ mi.}$

Change to "simplest form" or "lowest terms"

Round off to the nearest 10

Change to "equivalent fractions" with "least common denominator"

$$\frac{5}{10} = \frac{1}{2} = \frac{1}{2}$$

$$\frac{6}{9} = \frac{2}{3} = \frac{2}{3}$$

$$\frac{8}{100} = \frac{2}{25} = \frac{2}{25}$$

$$\frac{17}{34} \rightarrow \frac{1}{2}$$

$$\frac{112}{112} \rightarrow 1$$

$$\frac{358}{358} \rightarrow 1$$

$$\frac{73}{73} \rightarrow 1$$

$$\frac{96}{96} \rightarrow 1$$

$$\frac{2}{3}, \frac{3}{4} \rightarrow \frac{8}{12}, \frac{9}{12}$$

$$\frac{1}{2}, \frac{1}{4} \rightarrow \frac{2}{4}, \frac{1}{4}$$

$$\frac{1}{3}, \frac{1}{2} \rightarrow \frac{2}{6}, \frac{3}{6}$$

Estimate each answer by "rounding off each factor to the nearest 10." Then compare this "estimate" with the actual product.

estimate: $\underline{\quad} \times \underline{\quad} = \underline{\quad}$

$$\begin{array}{r} 17 \\ \times 13 \\ \hline \end{array}$$

----- larger
 =----- smaller
 ----- difference

estimate: $\underline{\quad} \times \underline{\quad} = \underline{\quad}$

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

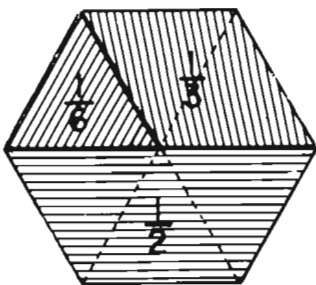
 =-----

	25¢	5¢	1¢
	2	0	4
+	1	3	3
<hr/>			

pennies
 ----- ¢
 ----- ¢
 ----- ¢

	\$1	10¢	1¢
	3	8	1
-	1	5	9
<hr/>			

dimes
 ----- 10¢
 ----- 10¢
 ----- 10¢



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

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

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

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

$$\frac{5}{6} - \frac{1}{3} =$$



How do you feel?

Change to "equivalent fractions" with the "least common denominator"

"Round off to the nearest 100"

Change to a "common fraction" in "simplest form" or "lowest terms"

$$\frac{1}{2}, \frac{3}{8} = \frac{\quad}{8}, \frac{\quad}{8}$$

$$\frac{1}{5}, \frac{1}{3} = \frac{\quad}{\quad}, \frac{\quad}{\quad}$$

$$\frac{2}{3}, \frac{3}{4} = \frac{\quad}{\quad}, \frac{\quad}{\quad}$$

$$\frac{175}{\quad} \rightarrow \underline{\quad}$$

$$\frac{113}{\quad} \rightarrow \underline{\quad}$$

$$\frac{909}{\quad} \rightarrow \underline{\quad}$$

$$\frac{990}{\quad} \rightarrow \underline{\quad}$$

$$\frac{1346}{\quad} \rightarrow \underline{\quad}$$

$$50\% = \frac{\quad}{\quad}$$

$$25\% = \frac{\quad}{\quad}$$

$$10\% = \frac{\quad}{\quad}$$

$$75\% = \frac{\quad}{\quad}$$

Estimate answers by "rounding off" the "divisor" to the nearest 10 and the "dividend" to the nearest 100. Then compare this "estimate" with the actual result.

estimate: $\frac{\quad}{\quad} \div \frac{\quad}{\quad} = \frac{\quad}{\quad}$

$$22 \overline{) 396}$$

----- larger
 = smaller
 _____ difference

estimate: $\frac{\quad}{\quad} \div \frac{\quad}{\quad} = \frac{\quad}{\quad}$

$$37 \overline{) 1184}$$

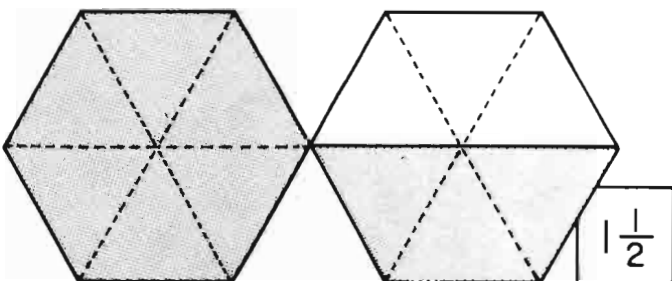
 =

yd.	ft.	in.
4	0	6
-	1	9

feet
 ----- ft.
 = ft.
 _____ ft.

m	dm	cm
3	4	6
+	2	7

centimeters
 ----- cm
 = cm
 _____ cm



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

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

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

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

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



How do you feel?

Change to a "mixed number" in "simplest form" or "lowest terms"

Change to "equivalent fractions with other denominators"

Change to a decimal fraction

$$\frac{14}{6} = 2\frac{2}{6} =$$

$$\frac{2}{3} = \frac{2}{9} = \frac{2}{15}$$

$$25\% = \frac{\quad}{100} =$$

$$\frac{22}{4} = \quad =$$

$$\frac{5}{7} = \frac{5}{14} = \frac{5}{35}$$

$$\frac{3}{5} = \frac{3}{10} =$$

$$\frac{34}{8} = \quad =$$

$$\frac{4}{5} = \frac{4}{10} = \frac{4}{100}$$

$$\frac{3}{25} = \frac{3}{100} =$$

Estimate each answer by "rounding off each factor to the nearest 10". Then compare this "estimate" with the actual product.

estimate: $\quad \times \quad = \quad$

$$\begin{array}{r} 76 \\ \times 54 \\ \hline \end{array}$$

----- larger
 = smaller
 _____ difference

estimate: $\quad \times \quad = \quad$

$$\begin{array}{r} 83 \\ \times 78 \\ \hline \end{array}$$

 =

25¢ 5¢ 1¢

1	4	3
---	---	---

x 2

--	--	--

nickels

----- 5¢
 x 2
 ----- 5¢

\$1 10¢ 1¢

2	4	7
---	---	---

x 3

--	--	--

dollars

\$ -----
 x 3

 \$ -----

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

$$\frac{100}{.15} - \frac{7}{100} = \frac{\quad}{100}$$

$$\frac{7}{100} + \frac{\quad}{.07} = \frac{\quad}{\quad}$$

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

$$\frac{.12}{\quad} - \frac{.03}{\quad} = \frac{\quad}{\quad}$$



How do you feel?

Change to "equivalent mixed numbers" with the "least common denominator"

Show other members of the same family

Change to a decimal fraction

$$3\frac{1}{5}, 1\frac{1}{2} = 3\frac{2}{10}, 1\frac{5}{10}$$

$$2\frac{2}{3} = 2\frac{4}{12} = 2\frac{10}{30}$$

$$125\% = \frac{\quad}{100} =$$

$$1\frac{3}{16}, 2\frac{7}{8} = 1\text{---}, 2\text{---}$$

$$3\frac{3}{5} = 3\frac{6}{10} = 3\frac{12}{100}$$

$$45\% = \frac{\quad}{100} =$$

$$1\frac{2}{3}, 3\frac{2}{7} = 1\text{---}, 3\text{---}$$

$$1\frac{5}{6} = 1\frac{10}{12} = 1\frac{25}{42}$$

$$\frac{4}{5} = \frac{\quad}{10} =$$

Estimate answers by rounding off "divisor" to nearest 10 and "dividend" to nearest 100. Then compare this "estimate" with the actual result.

estimate: $\text{---} \div \text{---} = \text{---}$

estimate: $\text{---} \div \text{---} = \text{---}$

$39 \overline{) 3198}$

 ----- larger

 ===== smaller

 _____ difference

$53 \overline{) 3551}$

 =====



How do you feel?

$200 \div 5$

$135 \div 5$

 _____ M

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

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

Change to
"simplest form" or
"lowest terms"

Change to a
"decimal fraction"

Change to a
"common fraction"
in "lowest terms"

$$\frac{50}{8} = \frac{\quad}{4} =$$

$$\frac{27}{6} = \quad =$$

$$\frac{54}{4} = \quad =$$

$$\frac{57}{9} = \quad =$$

$$50\% = \frac{\quad}{100} =$$

$$7\frac{1}{2} = \frac{\quad}{10} =$$

$$114\% = \quad =$$

$$\frac{18}{45} = \quad =$$

$$7\% = \quad =$$

$$75\% = \quad =$$

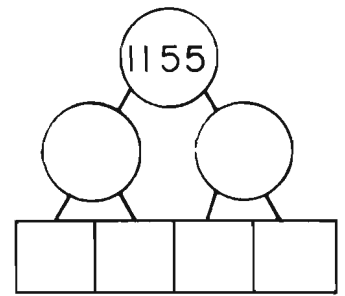
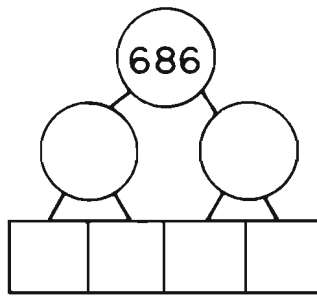
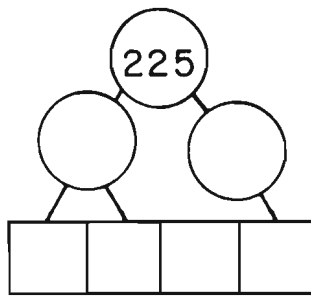
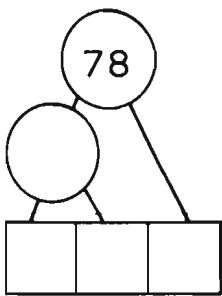
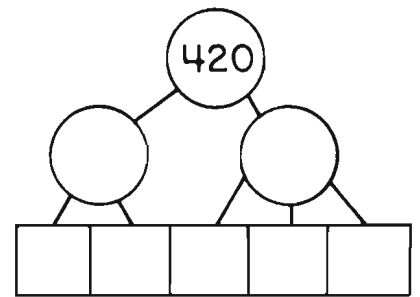
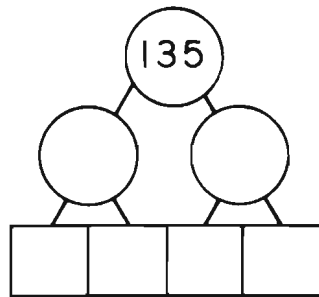
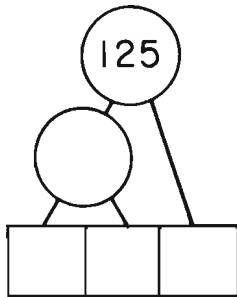
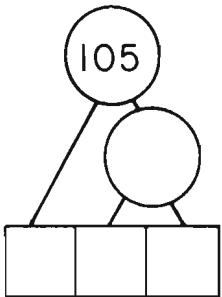
$$.16 = \quad =$$

$$150\% = \quad =$$

$$.008 = \quad =$$

$$1.45 = \quad =$$

... all factors greater than 1



$$\begin{array}{r} .3 \\ + .4 \\ \hline \end{array}$$

$$\begin{array}{r} .7 \\ + .7 \\ \hline \end{array}$$

$$\begin{array}{r} .9 \\ - .5 \\ \hline \end{array}$$

$$\begin{array}{r} 1.2 \\ - .4 \\ \hline \end{array}$$

$$\frac{1}{2} \times \frac{1}{3} = \text{---}$$

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

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

$$\frac{1}{4} \times \frac{2}{3} = \text{---}$$

$$\begin{array}{r} .5 \\ \times .5 \\ \hline \end{array}$$

$$\begin{array}{r} 6.3 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} .63 \\ \times .2 \\ \hline \end{array}$$

$$\begin{array}{r} .07 \\ \times .3 \\ \hline \end{array}$$

$$\frac{3}{4} \times \frac{1}{2} = \text{---}$$



How do you feel ?

Change to a "common fraction" in "lowest terms"

Change to "per cent"

Change to "equivalent fractions" with the "least common denominator"

$$113\% = \frac{\quad}{100} =$$

$$\frac{3}{4} = \frac{\quad}{100} = \quad\% \quad \frac{1}{7}, \frac{3}{5} = \frac{\quad}{\quad}, \frac{\quad}{\quad}$$

$$\frac{144}{8} = \quad =$$

$$1\frac{3}{5} = \quad = \quad\% \quad \frac{3}{8}, \frac{2}{3} = \frac{\quad}{\quad}, \frac{\quad}{\quad}$$

$$\frac{72}{54} = \quad =$$

$$\frac{17}{25} = \quad = \quad\% \quad \frac{3}{7}, \frac{4}{9} = \frac{\quad}{\quad}, \frac{\quad}{\quad}$$

Use only pairs of factors
"From the List"

2,3,5,7,11,13,17,19,23,29,31,37,41,43,47,53,59,
61,67,71,73,79,83,89,97,101,103,107,109,113

$$\frac{x}{226}$$

$$\frac{x}{177}$$

$$\frac{x}{249}$$

$$\frac{x}{291}$$

$$\frac{x}{321}$$

$$\frac{x}{335}$$

$$\frac{x}{427}$$

$$\frac{x}{763}$$

$$\frac{x}{201}$$

$$\frac{x}{259}$$

$$\frac{x}{319}$$

$$\frac{x}{395}$$

$$\frac{x}{403}$$

$$\frac{x}{581}$$

$$\frac{x}{583}$$

$$\frac{x}{1133}$$

Change to a decimal fraction

Round off to the nearest whole number

Change to "equivalent fractions" with "convenient denominators"

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

$$13\frac{7}{17} \rightarrow \underline{\quad}$$

$$\frac{2}{5} = \frac{\quad}{15} = \frac{\quad}{65}$$

$$7\frac{17}{20} = \quad =$$

$$7.09 \rightarrow \underline{\quad}$$

$$\frac{4}{9} = \frac{\quad}{36} = \frac{\quad}{81}$$

$$173\% = \quad =$$

$$135.7 \rightarrow \underline{\quad}$$

$$317\frac{5}{9} \rightarrow \underline{\quad}$$



How do you feel?

