



CD **ma**
A ROBERT W. J.

answers &
annotation

patterns & problems

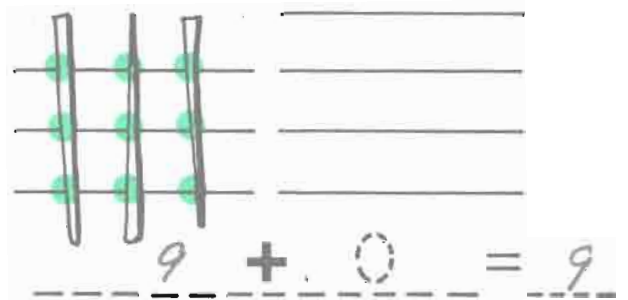
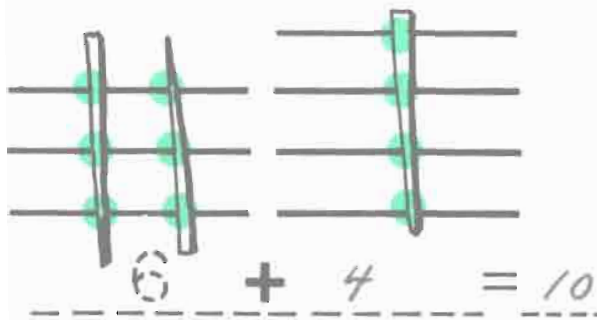
(Jumping around in mathematics)

C

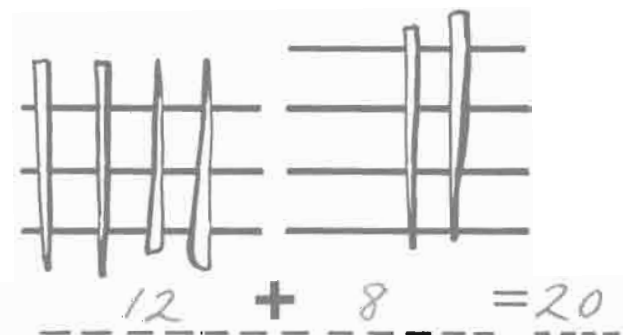
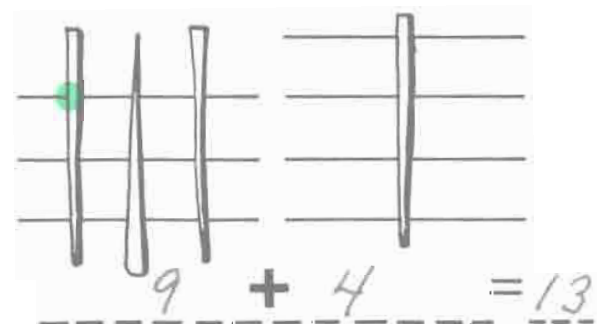
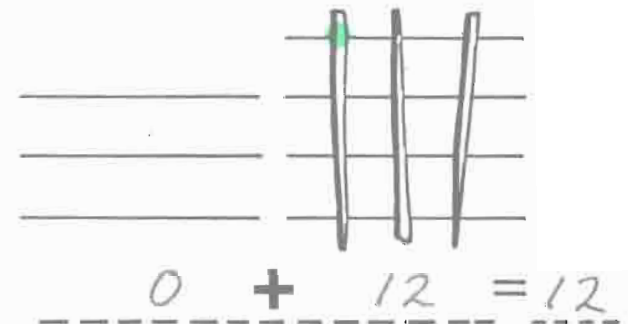
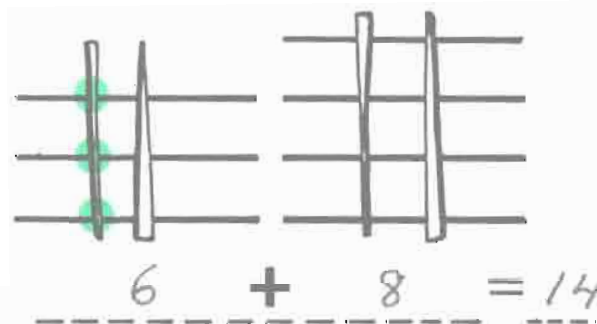
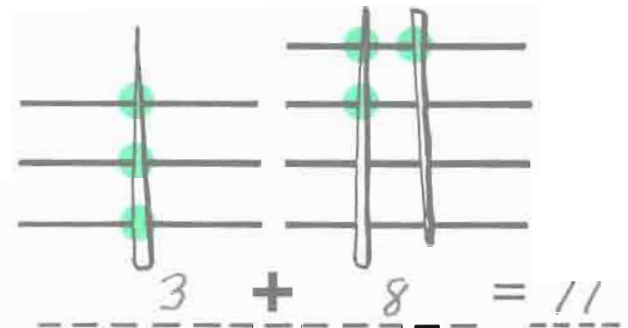
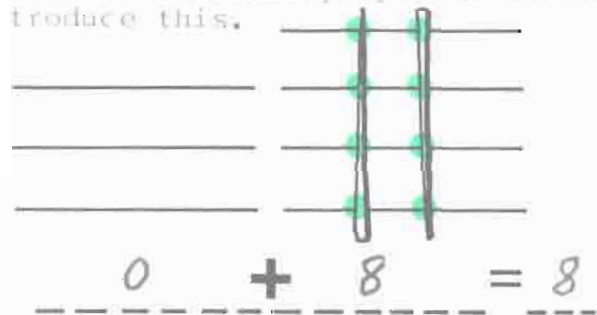
"Stick Arithmetic"

"Aritmética de Palos"

The children may use real sticks or marks on the diagram and count their crossing points. See also: *Developing Insights* pp. 117-137

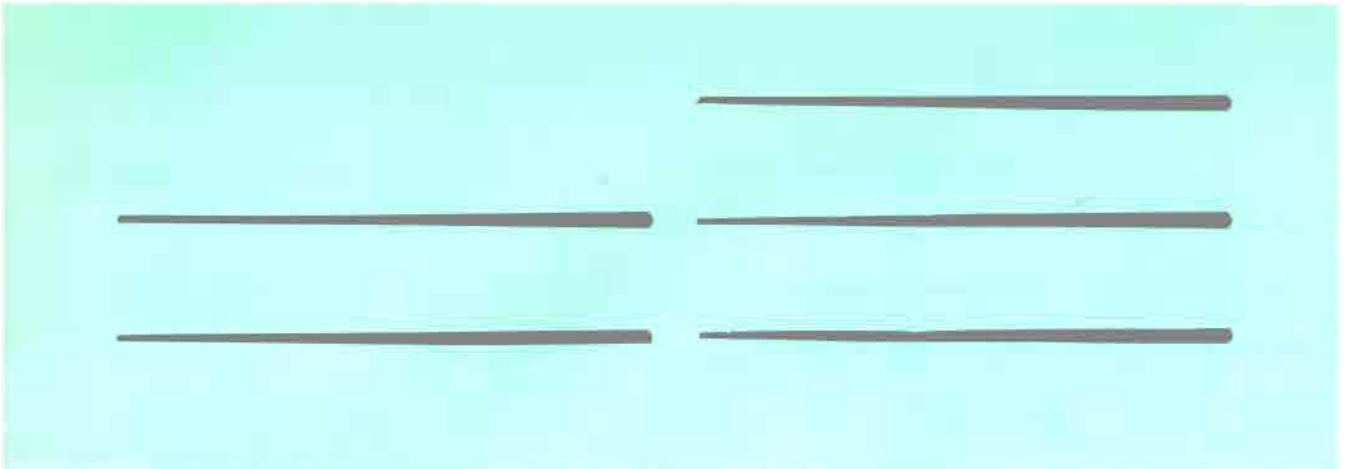


You may use toothpicks and a grid with an overhead projector to introduce this.



Stick Arithmetic

Aritmética de Palos



For children who want and/or need more like this, refer to pp. 05,06

$$\begin{array}{r} \text{---} \\ | \\ \text{---} \end{array} + \begin{array}{r} \text{---} \\ | \\ \text{---} \\ | \\ \text{---} \end{array} = \begin{array}{r} \text{---} \\ | \\ \text{---} \\ | \\ \text{---} \\ | \\ \text{---} \end{array}$$

2 + 3 = 5

$$\begin{array}{r} \text{---} \\ | \\ \text{---} \\ | \\ \text{---} \\ | \\ \text{---} \end{array} + \begin{array}{r} \text{---} \\ \text{---} \\ \text{---} \end{array} = \begin{array}{r} \text{---} \\ | \\ \text{---} \\ | \\ \text{---} \\ | \\ \text{---} \end{array}$$

4 + 0 = 4

$$\begin{array}{r} \text{---} \\ | \\ \text{---} \\ | \\ \text{---} \\ | \\ \text{---} \end{array} + \begin{array}{r} \text{---} \\ | \\ \text{---} \\ | \\ \text{---} \end{array} = \begin{array}{r} \text{---} \\ | \\ \text{---} \\ | \\ \text{---} \\ | \\ \text{---} \\ | \\ \text{---} \\ | \\ \text{---} \end{array}$$

4 + 3 = 7

$$\begin{array}{r} \text{---} \\ | \\ \text{---} \\ | \\ \text{---} \\ | \\ \text{---} \\ | \\ \text{---} \end{array} + \begin{array}{r} \text{---} \\ \text{---} \\ \text{---} \end{array} = \begin{array}{r} \text{---} \\ | \\ \text{---} \\ | \\ \text{---} \\ | \\ \text{---} \\ | \\ \text{---} \end{array}$$

or... 0 + 6 = 6

$$\begin{array}{r} \text{---} \\ | \\ \text{---} \\ | \\ \text{---} \\ | \\ \text{---} \end{array} + \begin{array}{r} \text{---} \\ | \\ \text{---} \\ | \\ \text{---} \end{array} = \begin{array}{r} \text{---} \\ | \\ \text{---} \\ | \\ \text{---} \\ | \\ \text{---} \\ | \\ \text{---} \\ | \\ \text{---} \\ | \\ \text{---} \end{array}$$

or... 6 + 3 = 9

$$\begin{array}{r} \text{---} \\ | \\ \text{---} \\ | \\ \text{---} \end{array} + \begin{array}{r} \text{---} \\ | \\ \text{---} \\ | \\ \text{---} \\ | \\ \text{---} \\ | \\ \text{---} \end{array} = \begin{array}{r} \text{---} \\ | \\ \text{---} \\ | \\ \text{---} \\ | \\ \text{---} \\ | \\ \text{---} \\ | \\ \text{---} \\ | \\ \text{---} \\ | \\ \text{---} \end{array}$$

or... 10 + 0 = 10

Patterns in Answers

Muestras en las Respuestas

Be sure to remind the children to watch the signs! More like this on pp. 67 and 72. See also: Drill and Practice pp. 124-134

$$\begin{array}{r} 10 \\ - 9 \\ \hline 1 \end{array} \quad \begin{array}{r} 7 \\ - 5 \\ \hline 2 \end{array} \quad \begin{array}{r} 9 \\ - 6 \\ \hline 3 \end{array} \quad \begin{array}{r} 2 \\ + 2 \\ \hline 4 \end{array}$$

$$\begin{array}{r} 4 \\ + 1 \\ \hline 5 \end{array} \quad \begin{array}{r} 9 \\ - 5 \\ \hline 4 \end{array} \quad \begin{array}{r} 11 \\ - 8 \\ \hline 3 \end{array} \quad \begin{array}{r} 9 \\ - 7 \\ \hline 2 \end{array}$$

$$\begin{array}{r} 8 \\ - 6 \\ \hline 2 \end{array} \quad \begin{array}{r} 7 \\ - 3 \\ \hline 4 \end{array} \quad \begin{array}{r} 10 \\ - 4 \\ \hline 6 \end{array} \quad \begin{array}{r} 5 \\ + 3 \\ \hline 8 \end{array}$$

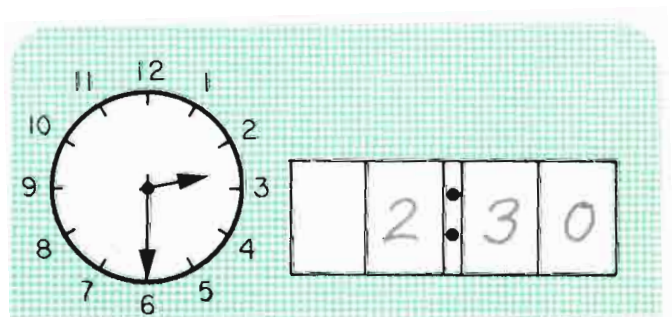
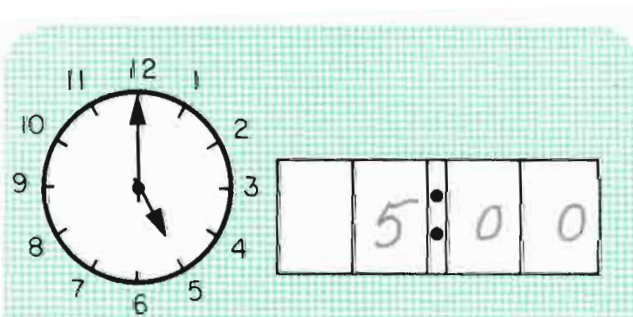
$$\begin{array}{r} 9 \\ - 8 \\ \hline 1 \end{array} \quad \begin{array}{r} 9 \\ - 6 \\ \hline 3 \end{array} \quad \begin{array}{r} 10 \\ - 5 \\ \hline 5 \end{array} \quad \begin{array}{r} 3 \\ + 4 \\ \hline 7 \end{array}$$

$$\begin{array}{r} 11 \\ - 5 \\ \hline 6 \end{array} \quad \begin{array}{r} 8 \\ - 2 \\ \hline 6 \end{array} \quad \begin{array}{r} 2 \\ + 5 \\ \hline 7 \end{array} \quad \begin{array}{r} 11 \\ - 4 \\ \hline 7 \end{array}$$

$$\begin{array}{r} 4 \\ + 4 \\ \hline 8 \end{array} \quad \begin{array}{r} 12 \\ - 4 \\ \hline 8 \end{array} \quad \begin{array}{r} 9 \\ + 0 \\ \hline 9 \end{array} \quad \begin{array}{r} 13 \\ - 4 \\ \hline 9 \end{array}$$

$$\begin{array}{r} 3 \\ + 9 \\ \hline 12 \end{array} \quad \begin{array}{r} 6 \\ + 7 \\ \hline 13 \end{array} \quad \begin{array}{r} 10 \\ + 4 \\ \hline 14 \end{array} \quad \begin{array}{r} 8 \\ + 7 \\ \hline 15 \end{array}$$

$$\begin{array}{r} 8 \\ + 8 \\ \hline 16 \end{array} \quad \begin{array}{r} 10 \\ + 5 \\ \hline 15 \end{array} \quad \begin{array}{r} 5 \\ + 9 \\ \hline 14 \end{array} \quad \begin{array}{r} 8 \\ + 5 \\ \hline 13 \end{array}$$



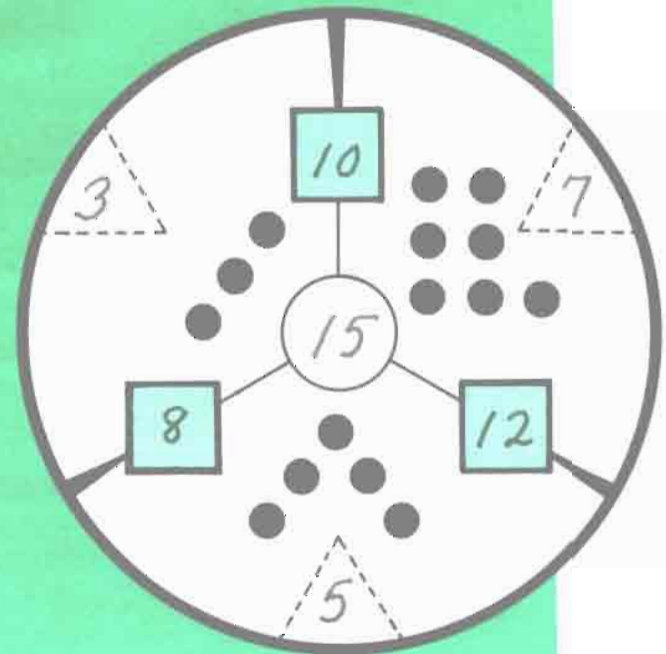
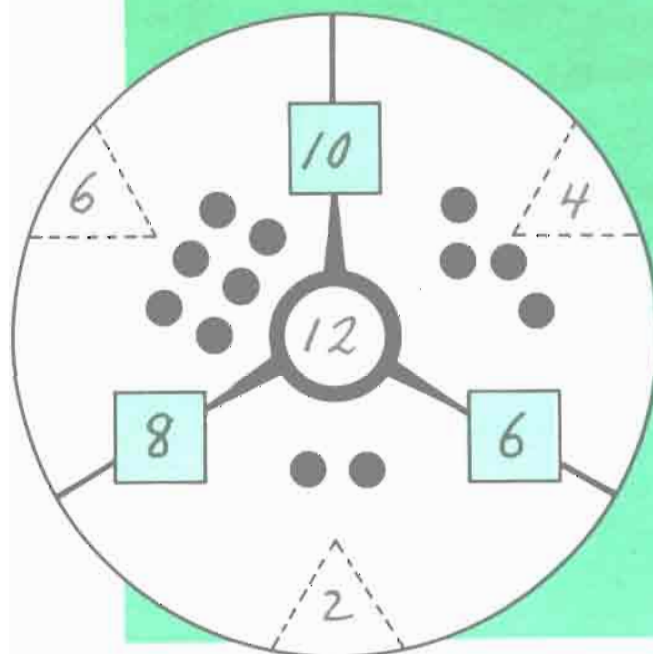
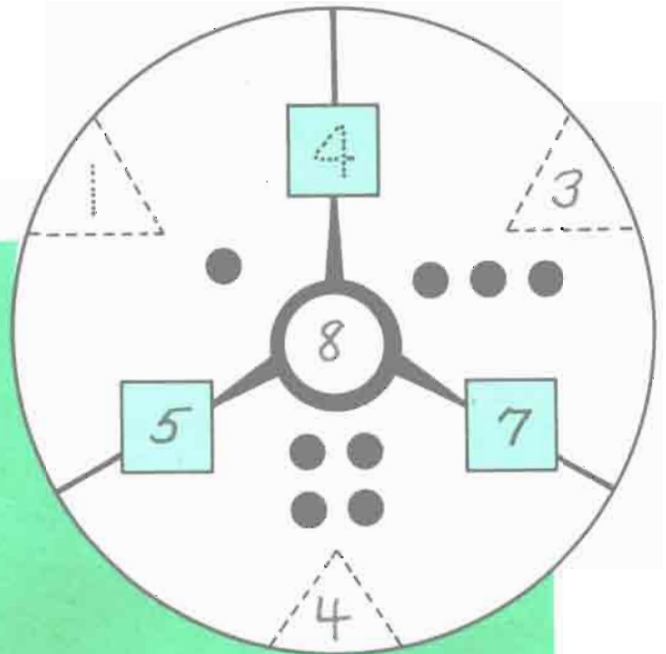
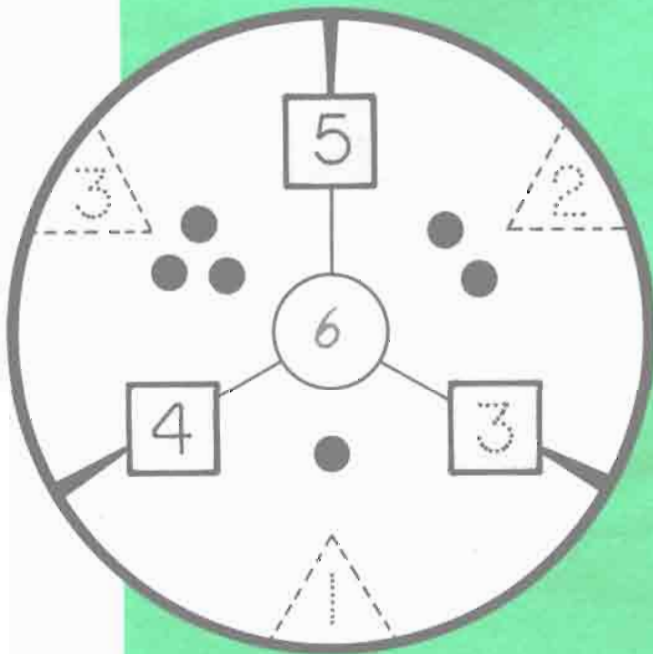
Introducing "3-Way Puzzles"

(you may need counters)

Introduciendo "Rompecabezas de 3 Maneras"

(tal vez necesite objetos para contar)

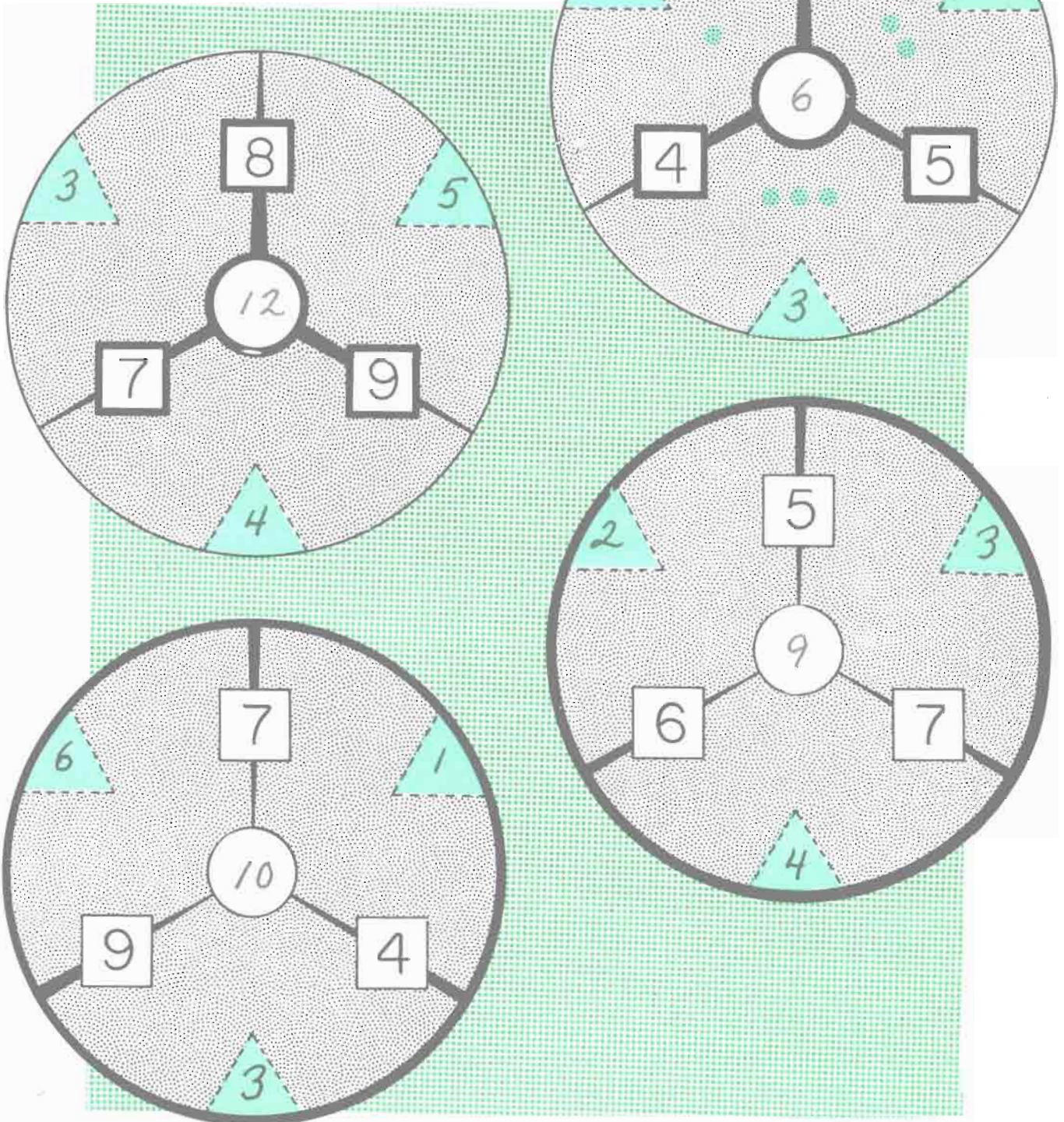
See also: D&P 61-75



More "3-Way Puzzles"

Más "Rompecabezas de 3 Maneras"

Encourage the children to experiment with counters until they come up right. Another like this on p. 71.





The Code

La Clave

A 1	B 2	C 3	D 4	E 5	F 6	G 7	H 8	I 9	J 10
K 11	L 12	M 13	N 14	O 15	P 16	Q 17	R 18	S 19	T 20
U 21	V 22	W 23	X 24	Y 25	Z 26		?		

Encourage the children to create new codes of their own!

Use the code to figure out the sentences below.

Use la clave para comprender las frases abajo.

C A T S | J U M P | M U D | P U D D L E S
 3 1 20 19 | 10 21 13 16 | 13 21 4 | 16 21 4 4 12 5 19

G A T O S | S A L T A N | P O R | C H A R C O S
 7 1 20 15 19 | 19 1 12 20 1 14 | 16 15 18 | 3 8 1 18 3 15 19

M O O N | M E N | A R E | M A D E | O F | C H E E S E
 13 15 15 14 | 13 5 14 | 1 18 5 | 13 1 4 5 | 15 6 | 3 8 5 5 19 5

H O M B R E S | D E | L A | L U N A
 8 15 13 2 18 5 19 | 4 5 | 12 1 | 12 21 14 1

S O N | D E | Q U E S O
 19 15 14 | 4 5 | 17 21 5 19 15

Now make up codes of your own!

¡ Ahora haga sus propias claves!

Scrambled Words

Palabras Revueltas

Two of the puzzles on each of the Scrambled Words pages are in Spanish. There are more on pages 70 and 78.

I	C	Y	A	N	E	A	D
4	5	2	10	3	7	9	6
+3	-1	+6	-5	+3	-6	+1	+3
<hr/> 7	<hr/> 4	<hr/> 8	<hr/> 5	<hr/> 6	<hr/> 1	<hr/> 10	<hr/> 9

$\frac{2}{2}$ $\frac{14}{14}$ $\frac{A}{5}$ $\frac{3}{3}$ $\frac{N}{6}$ $\frac{I}{7}$ $\frac{C}{4}$ $\frac{E}{1}$ $\frac{13}{13}$ $\frac{D}{9}$ $\frac{A}{10}$ $\frac{Y}{8}$ $\frac{12}{12}$ $\frac{11}{11}$

I	C	L	A	F	I	E	D
7	9	8	5	4	7	2	10
+3	-4	-5	+6	+4	-3	+5	-8
<hr/> 10	<hr/> 5	<hr/> 3	<hr/> 11	<hr/> 8	<hr/> 4	<hr/> 7	<hr/> 2

$\frac{12}{12}$ $\frac{1}{1}$ $\frac{F}{8}$ $\frac{E}{7}$ $\frac{L}{3}$ $\frac{I}{4}$ $\frac{C}{5}$ $\frac{I}{10}$ $\frac{D}{2}$ $\frac{A}{11}$ $\frac{D}{2}$ $\frac{9}{9}$ $\frac{13}{13}$ $\frac{6}{6}$

D	I	A	L	A	H	O	Y
2	9	12	6	12	13	7	11
+7	+3	-5	+7	-8	-5	+7	-9
<hr/> 9	<hr/> 12	<hr/> 7	<hr/> 13	<hr/> 4	<hr/> 8	<hr/> 14	<hr/> 2

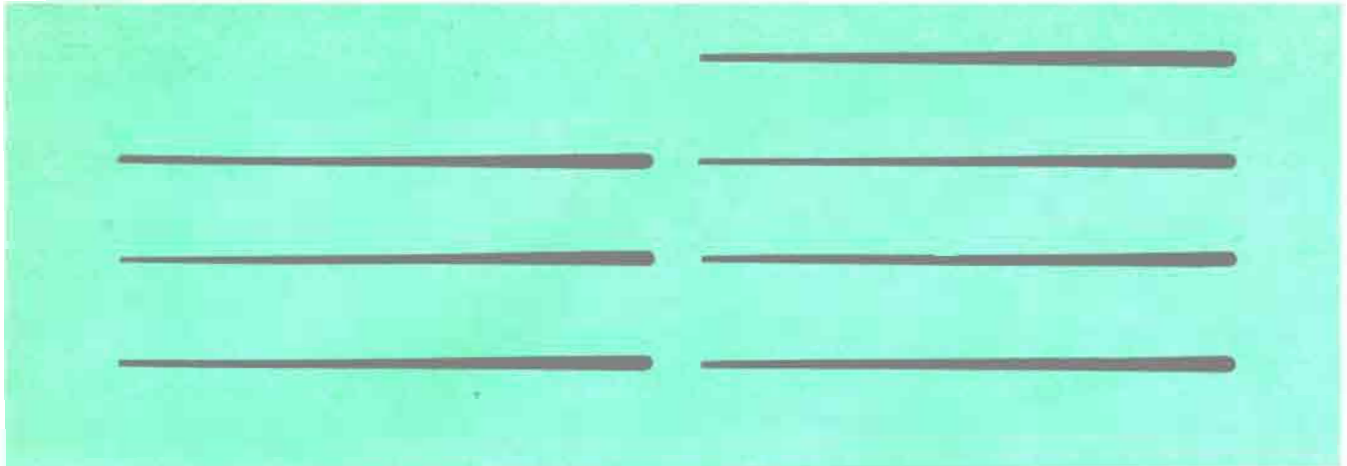
$\frac{15}{15}$ $\frac{A}{7}$ $\frac{5}{5}$ $\frac{H}{8}$ $\frac{O}{14}$ $\frac{L}{13}$ $\frac{I}{12}$ $\frac{D}{9}$ $\frac{A}{4}$ $\frac{Y}{2}$ $\frac{1}{1}$ $\frac{3}{3}$ $\frac{11}{11}$ $\frac{6}{6}$

N	A	I	V	A	O	C	C
9	15	8	11	15	12	5	17
+9	-6	+8	-7	-8	-6	+9	-9
<hr/> 18	<hr/> 9	<hr/> 16	<hr/> 4	<hr/> 7	<hr/> 6	<hr/> 14	<hr/> 8

$\frac{24}{24}$ $\frac{10}{10}$ $\frac{3}{3}$ $\frac{11}{11}$ $\frac{13}{13}$ $\frac{V}{4}$ $\frac{A}{9}$ $\frac{C}{14}$ $\frac{A}{7}$ $\frac{C}{8}$ $\frac{I}{16}$ $\frac{O}{6}$ $\frac{N}{18}$ $\frac{12}{12}$

Stick Arithmetic

Aritmética de Palos



See also: D. I. pp. 89-109

$$3 + 8 = 11$$

or... $0 + 12 = 12$

$$9 + 4 = 13$$

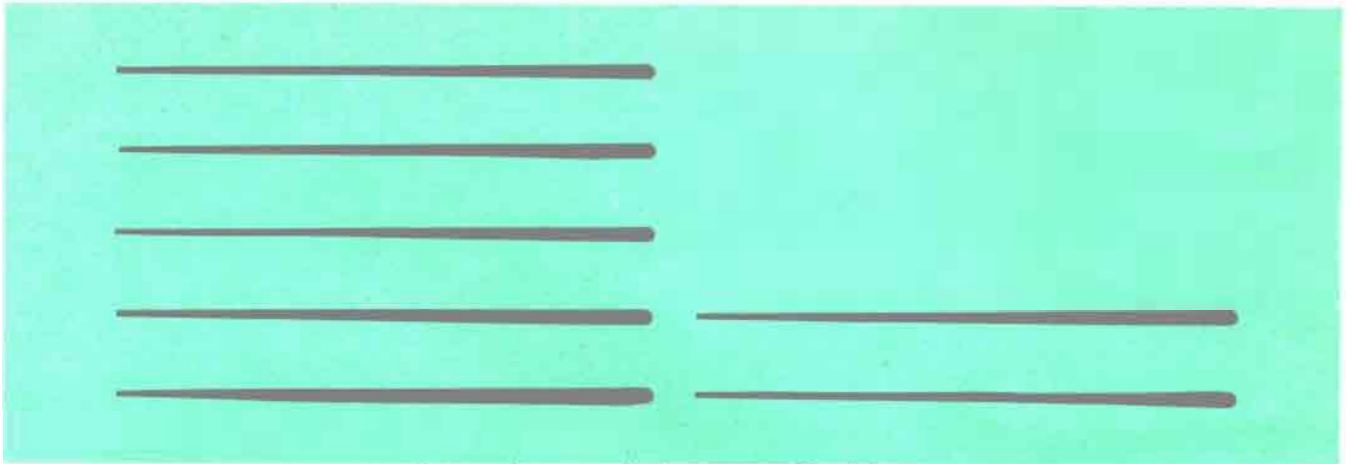
$$6 + 8 = 14$$

or... $15 + 0 = 15$

or... $12 + 4 = 16$

Stick Arithmetic

Aritmética de Palos



See also: D.I. pp. 40-44

$5 + 2 = 7$

or.. $0 + 10 = 10$

$10 + 0 = 10$

$5 + 4 = 9$

$10 + 2 = 12$

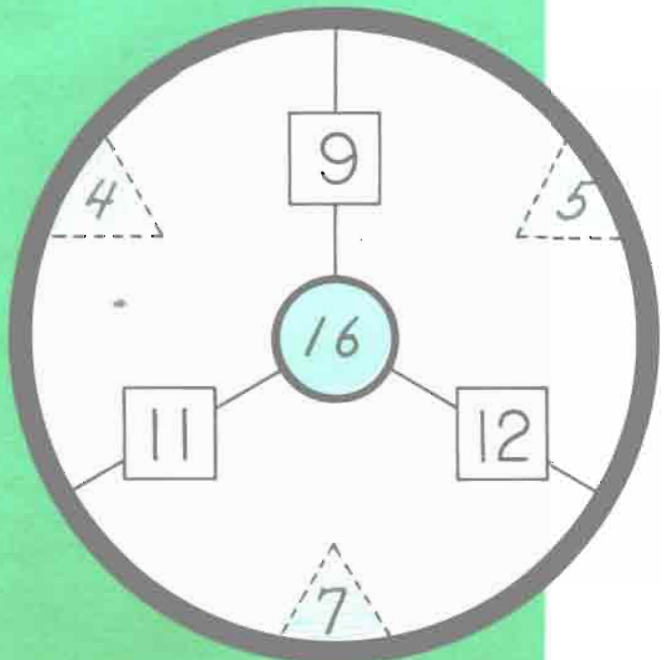
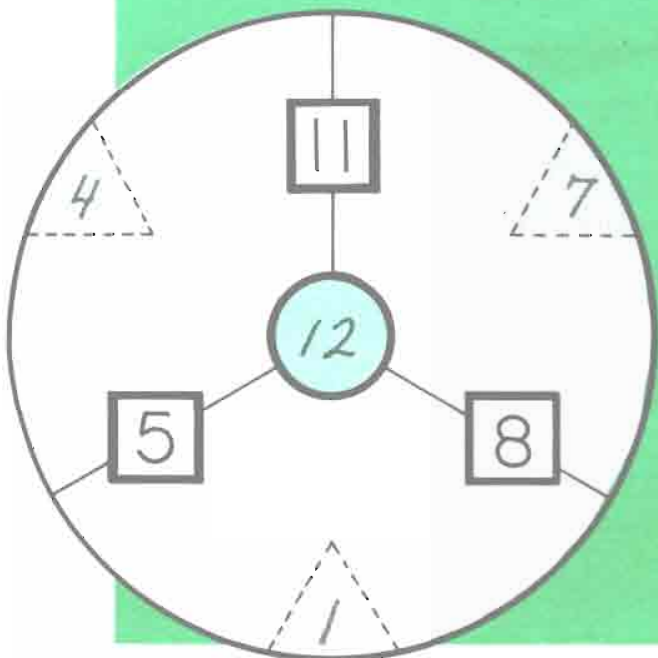
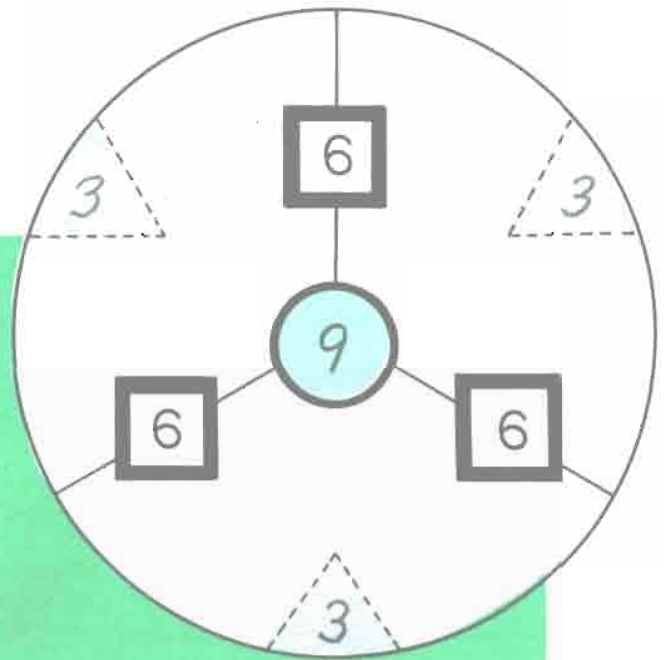
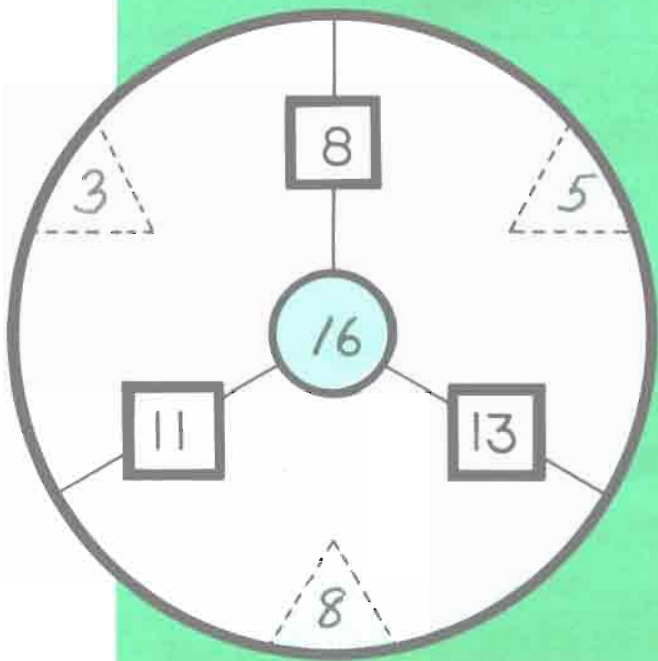
or.. $0 + 16$

$10 + 6 = 16$

$5 + 6 = 11$

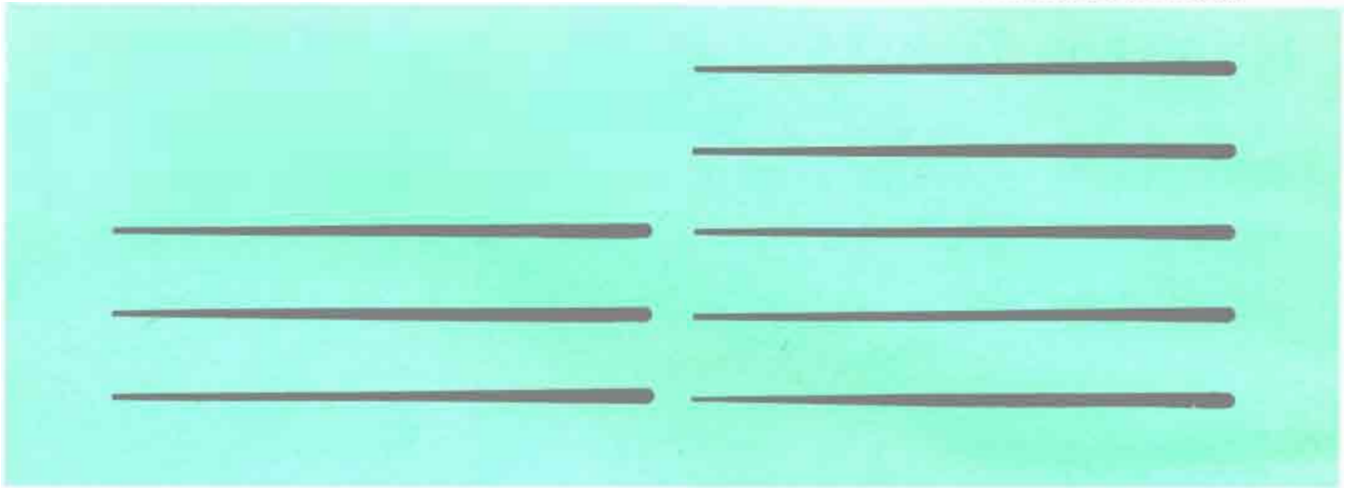
"3-Way Puzzles"

"Rompecabezas de 3 Maneras"



Stick Arithmetic

Aritmética de Palos



$$\begin{array}{c} \text{or } 15 \\ \text{or } 0 \end{array} + \begin{array}{c} \text{or } 5 \\ \text{or } 20 \end{array} = 20$$

$$3 + 5 = 8$$

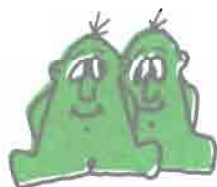
$$6 + 5 = 11$$

$$\begin{array}{c} \text{or } 18 \\ \text{or } 3 \end{array} + \begin{array}{c} \text{or } 5 \\ \text{or } 20 \end{array} = 23$$

$$\begin{array}{c} \text{or } 21 \\ \text{or } 6 \end{array} + \begin{array}{c} \text{or } 0 \\ \text{or } 15 \end{array} = 21$$

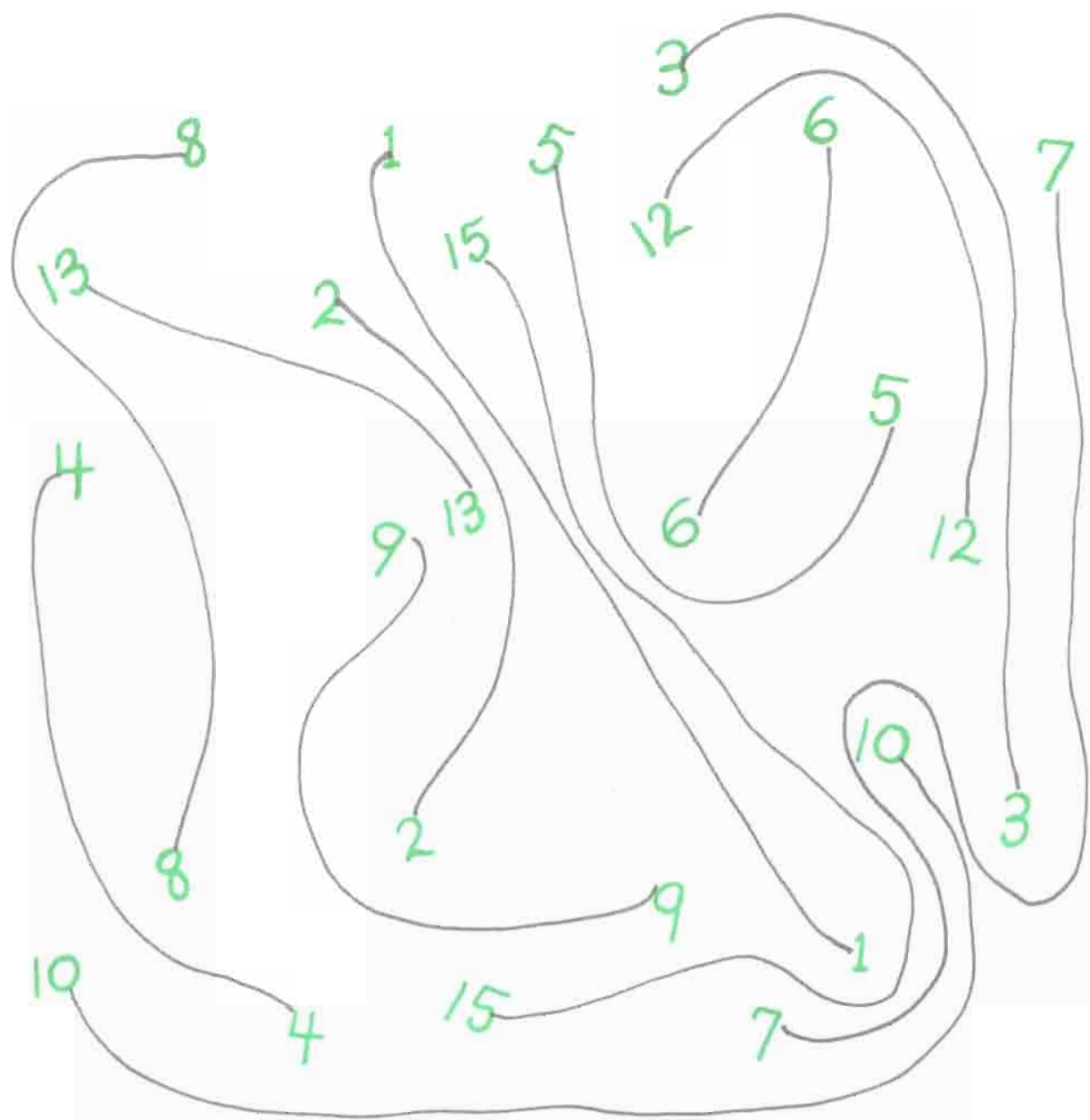
$$\begin{array}{c} \text{or } 15 \\ \text{or } 0 \end{array} + \begin{array}{c} \text{or } 10 \\ \text{or } 25 \end{array} = 25$$

NÚMEROS DOBLES



DOUBLE NUMBERS

Conecte el mismo número sin cruzar líneas por favor!
Please connect the same numbers without crossing lines.

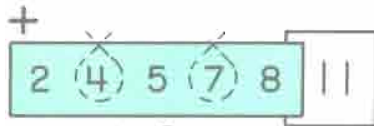


There are lots of ways to connect the numbers since lines can curve however necessary. PLEASE refer the children to page 73 for another "friendly numbers" page.

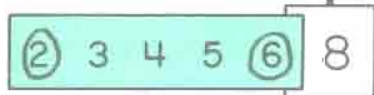
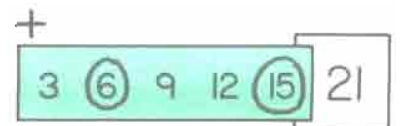
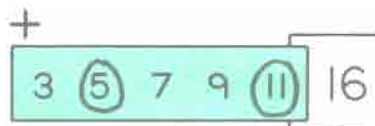
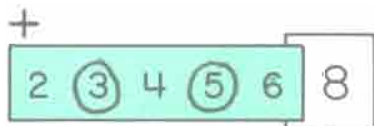
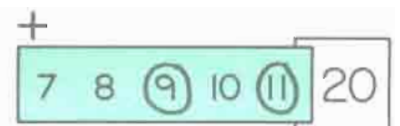
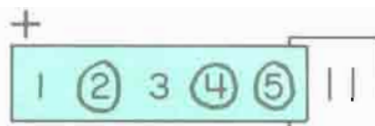
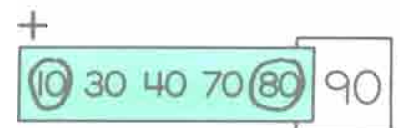
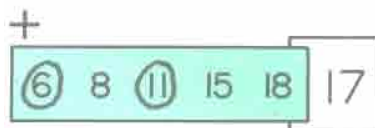
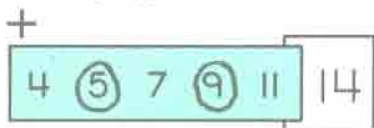
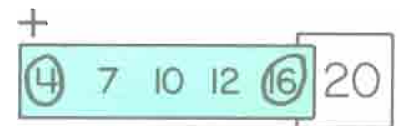
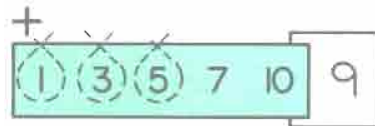
Loop Arithmetic

Aritmética de Lazo

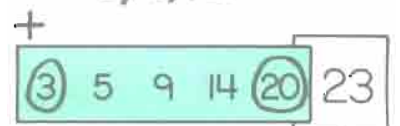
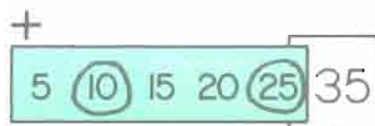
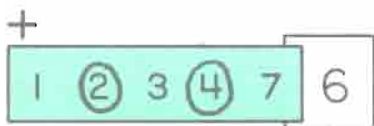
Refer to page 74 for another like this. See also: D&P pp. 140-142



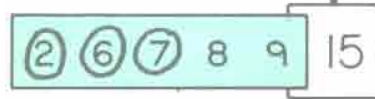
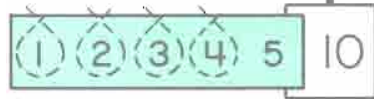
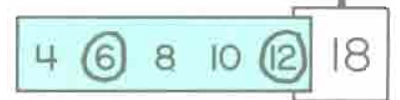
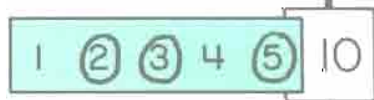
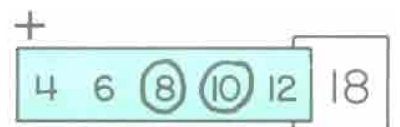
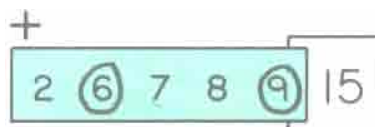
or 2,4,5.



or 3,6,12



or 20,15



From the List

1, 2, 3, 4, 5, 6

$$\begin{array}{r} 1 \\ \hline 2 \\ \hline + 6 \\ \hline 9 \end{array} \quad \begin{array}{r} 1 \\ \hline 3 \\ \hline + 5 \\ \hline 9 \end{array} \quad \begin{array}{r} 2 \\ \hline 3 \\ \hline + 4 \\ \hline 9 \end{array}$$

De la Lista

1, 2, 3, 4, 5, 6

$$\begin{array}{r} 1 \\ \hline 3 \\ \hline + 6 \\ \hline 10 \end{array} \quad \begin{array}{r} 1 \\ \hline 4 \\ \hline + 5 \\ \hline 10 \end{array} \quad \begin{array}{r} 2 \\ \hline 3 \\ \hline + 5 \\ \hline 10 \end{array}$$

Only the numbers in the "list" above the problems may be used.
Refer to page 76 for another like this.

1, 2, 3, 4, 5, 6

$$\begin{array}{r} 2 \\ \hline 3 \\ \hline + 6 \\ \hline || \end{array} \quad \begin{array}{r} 2 \\ \hline 4 \\ \hline + 5 \\ \hline || \end{array} \quad \begin{array}{r} 1 \\ \hline 4 \\ \hline + 6 \\ \hline || \end{array}$$

1, 2, 3, 4, 5, 6

$$\begin{array}{r} 1 \\ \hline 5 \\ \hline + 6 \\ \hline 12 \end{array} \quad \begin{array}{r} 2 \\ \hline 4 \\ \hline + 6 \\ \hline 12 \end{array} \quad \begin{array}{r} 3 \\ \hline 4 \\ \hline + 5 \\ \hline 12 \end{array}$$

1, 2, 3, 4, 5, 6

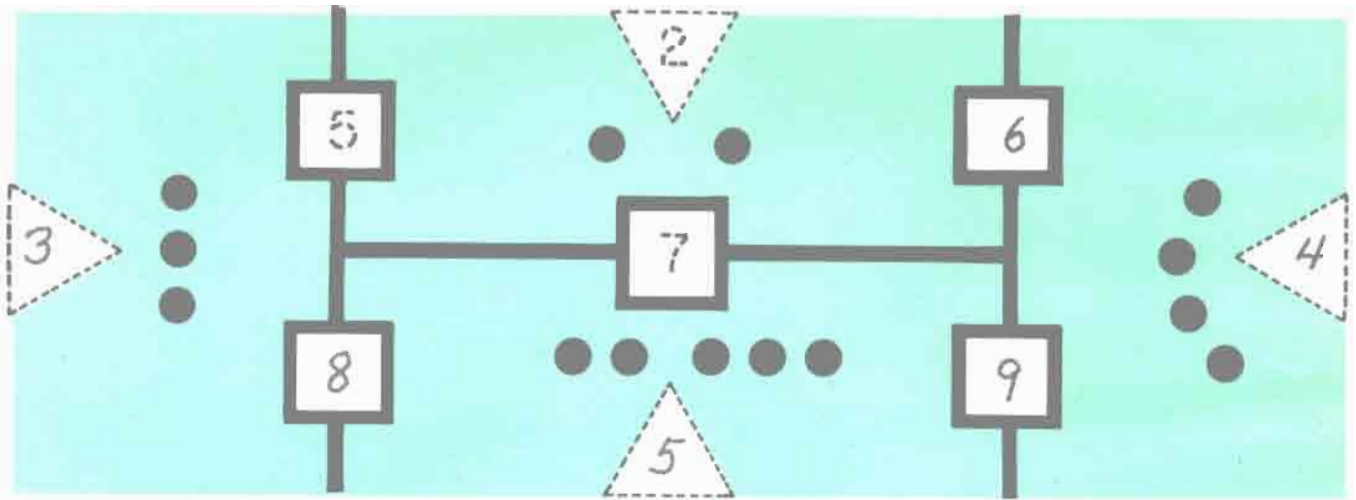
$$\begin{array}{r} 1 \\ \hline 2 \\ \hline + 3 \\ \hline 6 \end{array} \quad \begin{array}{r} 1 \\ \hline 2 \\ \hline + 4 \\ \hline 7 \end{array} \quad \begin{array}{r} 1 \\ \hline 2 \\ \hline + 5 \\ \hline 8 \end{array}$$

1, 2, 3, 4, 5, 6

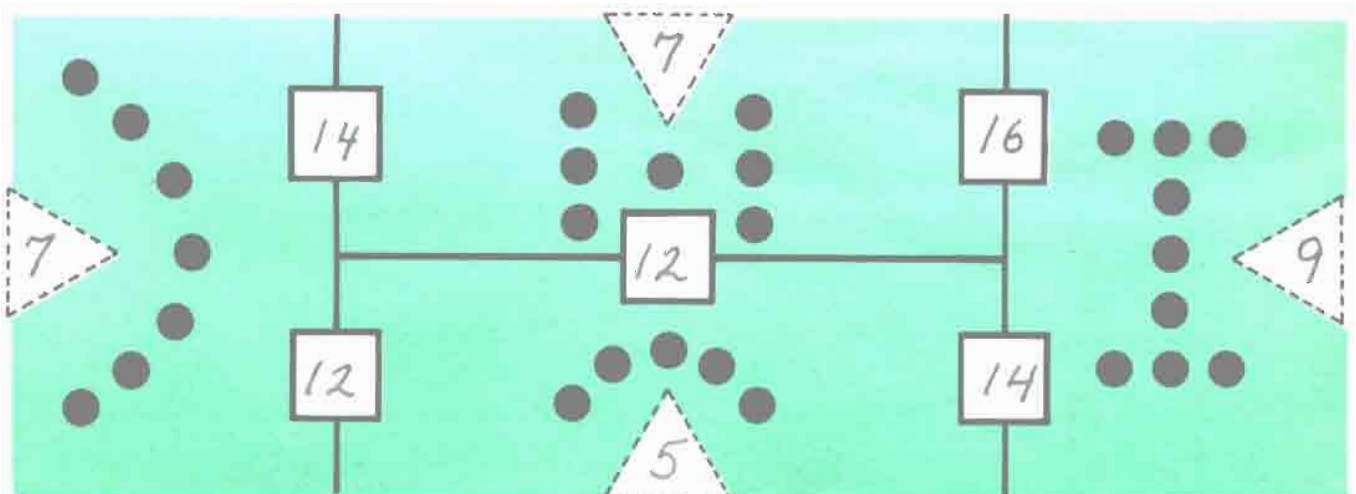
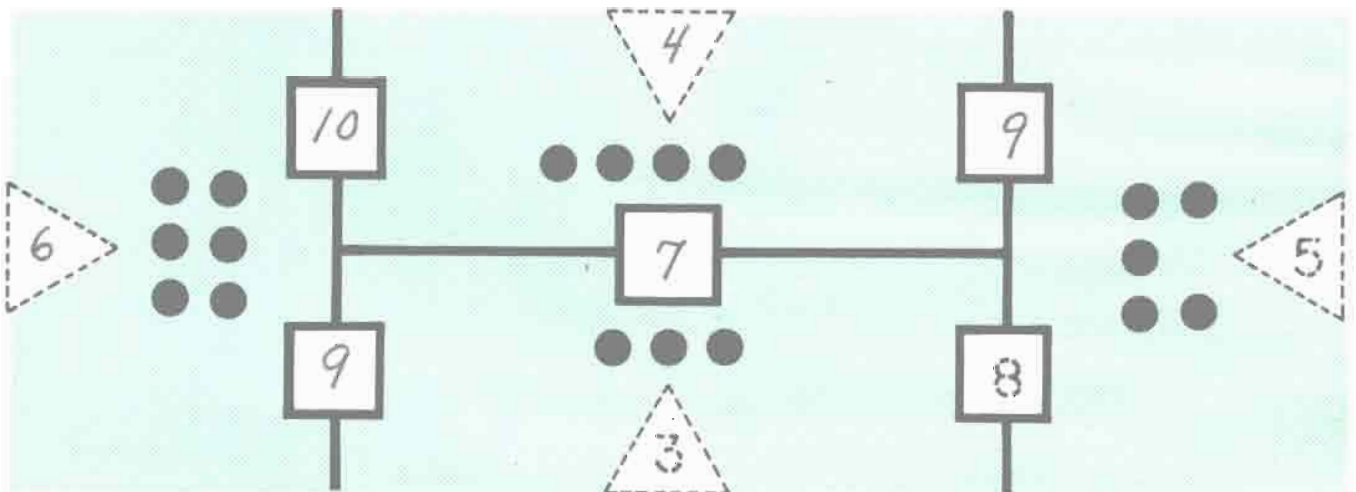
$$\begin{array}{r} 5 \\ \hline 4 \\ \hline + 4 \\ \hline 13 \end{array} \quad \begin{array}{r} 5 \\ \hline 5 \\ \hline + 4 \\ \hline 14 \end{array} \quad \begin{array}{r} 5 \\ \hline 5 \\ \hline + 5 \\ \hline 15 \end{array}$$

Introducing "4-way Puzzles"
 (you may need counters)

Introduciendo "Rompecabezas de 4 Maneras"
 (tal vez necesite objetos para contar.)



Refer to pages 75 and 79 for more like this. See also: D&P pp. 61-75



1, 2, 3, 7, 8, 9

$$\begin{array}{r} 1 \\ \hline 2 \\ \hline + 9 \\ \hline 12 \end{array} \quad \begin{array}{r} 1 \\ \hline 3 \\ \hline + 8 \\ \hline 12 \end{array} \quad \begin{array}{r} 2 \\ \hline 3 \\ \hline + 7 \\ \hline 12 \end{array}$$

2, 3, 4, 7, 8, 9

$$\begin{array}{r} 2 \\ \hline 3 \\ \hline + 9 \\ \hline 14 \end{array} \quad \begin{array}{r} 2 \\ \hline 4 \\ \hline + 8 \\ \hline 14 \end{array} \quad \begin{array}{r} 3 \\ \hline 4 \\ \hline + 7 \\ \hline 14 \end{array}$$

2, 3, 4, 6, 7, 8

$$\begin{array}{r} 2 \\ \hline 4 \\ \hline + 6 \\ \hline 12 \end{array} \quad \begin{array}{r} 2 \\ \hline 3 \\ \hline + 7 \\ \hline 12 \end{array} \quad \begin{array}{r} 3 \\ \hline 4 \\ \hline + 5 \\ \hline 12 \end{array}$$

2, 3, 4, 5, 6, 7

$$\begin{array}{r} 7 \\ \hline 4 \\ \hline + 2 \\ \hline 13 \end{array} \quad \begin{array}{r} 6 \\ \hline 4 \\ \hline + 3 \\ \hline 13 \end{array} \quad \begin{array}{r} 6 \\ \hline 5 \\ \hline + 2 \\ \hline 13 \end{array}$$

2, 3, 4, 7, 8, 9

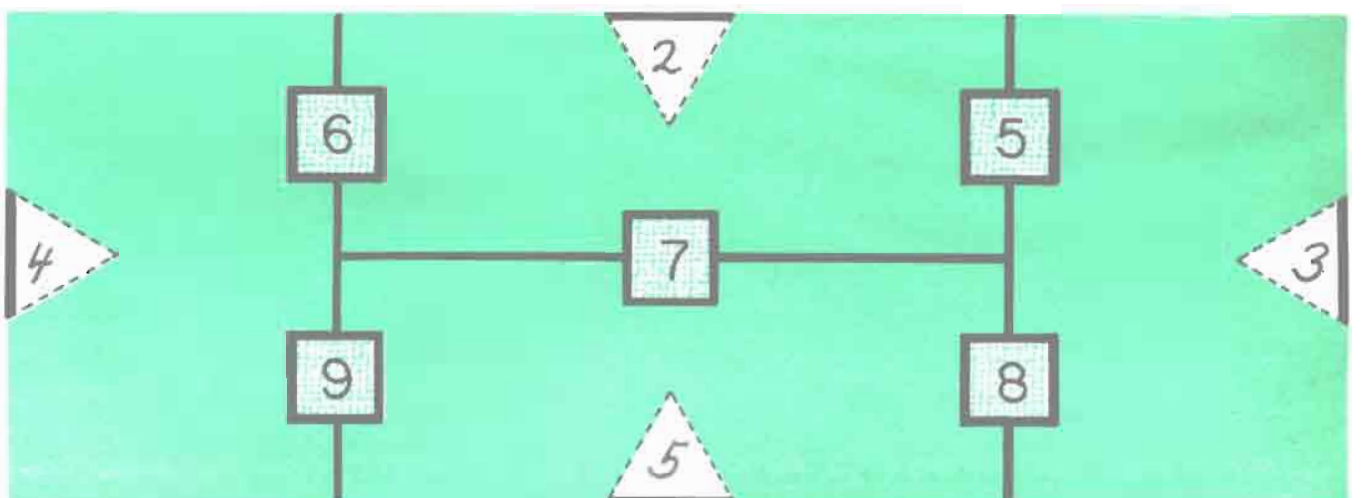
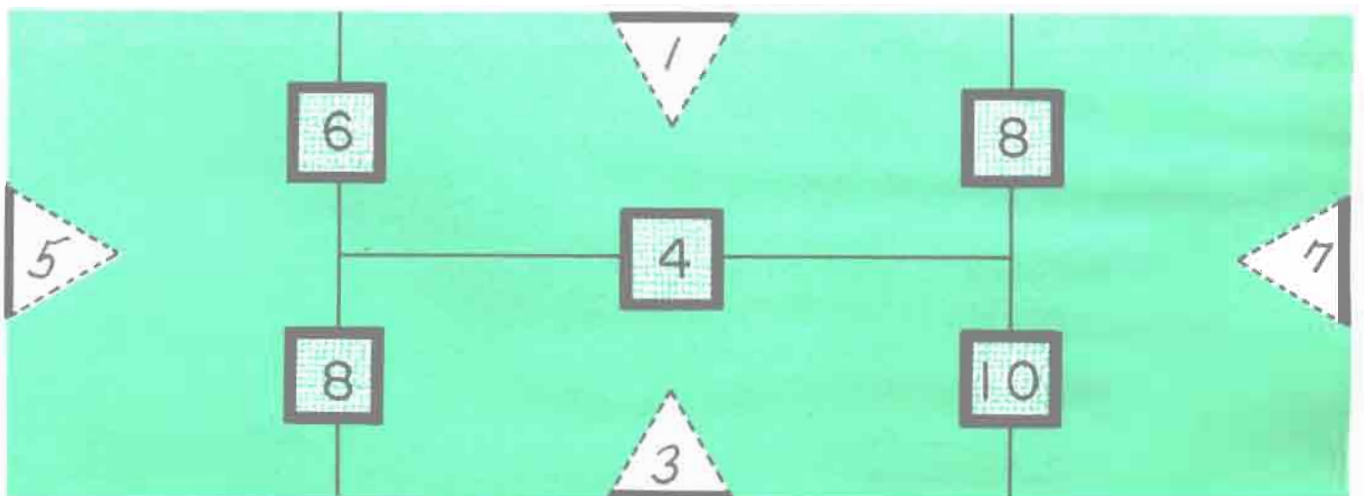
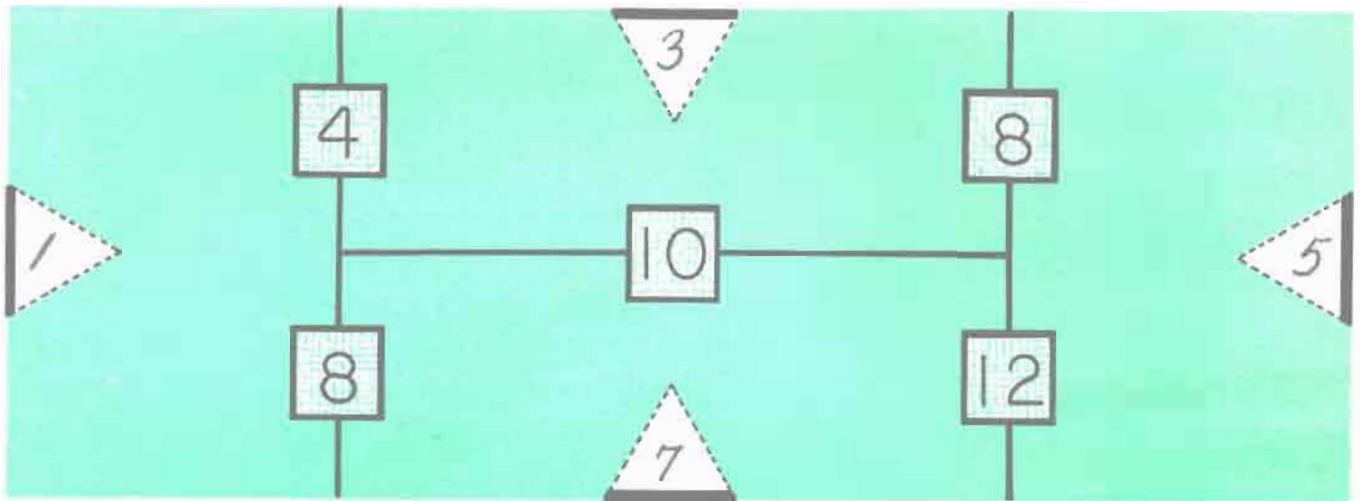
$$\begin{array}{r} 9 \\ \hline 8 \\ \hline + 2 \\ \hline 19 \end{array} \quad \begin{array}{r} 9 \\ \hline 7 \\ \hline + 3 \\ \hline 19 \end{array} \quad \begin{array}{r} 8 \\ \hline 7 \\ \hline + 4 \\ \hline 19 \end{array}$$

1, 2, 3, 7, 8, 9

$$\begin{array}{r} 9 \\ \hline 8 \\ \hline + 1 \\ \hline 18 \end{array} \quad \begin{array}{r} 9 \\ \hline 7 \\ \hline + 2 \\ \hline 18 \end{array} \quad \begin{array}{r} 8 \\ \hline 7 \\ \hline + 3 \\ \hline 18 \end{array}$$

More "4-way Puzzles"
(you may need counters)

Más "Rompecabezas de 4 Maneras"
(tal vez necesite objetos para contar)



M	E	N	U	S	C	R	B
7	4	14	5	14	10	14	12
+ 1	+ 6	- 8	+ 6	- 7	- 5	- 5	- 8
<hr style="width: 50%; margin: 0 auto;"/>	<hr style="width: 50%; margin: 0 auto;"/>	<hr style="width: 50%; margin: 0 auto;"/>	<hr style="width: 50%; margin: 0 auto;"/>	<hr style="width: 50%; margin: 0 auto;"/>	<hr style="width: 50%; margin: 0 auto;"/>	<hr style="width: 50%; margin: 0 auto;"/>	<hr style="width: 50%; margin: 0 auto;"/>
8	10	6	11	7	5	9	4

$\frac{3}{}$	$\frac{12}{}$	$\frac{N}{6}$	$\frac{U}{11}$	$\frac{M}{8}$	$\frac{B}{4}$	$\frac{E}{10}$	$\frac{R}{9}$	$\frac{S}{7}$	$\frac{13}{}$	$\frac{C}{5}$	$\frac{A}{}$	$\frac{N}{6}$	$\frac{14}{}$
--------------	---------------	---------------	----------------	---------------	---------------	----------------	---------------	---------------	---------------	---------------	--------------	---------------	---------------

D	I	R	E	N	S	F	B
3	13	4	9	18	13	15	6
+ 8	- 6	+ 9	- 5	- 9	- 8	- 7	+ 6
<hr style="width: 50%; margin: 0 auto;"/>	<hr style="width: 50%; margin: 0 auto;"/>	<hr style="width: 50%; margin: 0 auto;"/>	<hr style="width: 50%; margin: 0 auto;"/>	<hr style="width: 50%; margin: 0 auto;"/>	<hr style="width: 50%; margin: 0 auto;"/>	<hr style="width: 50%; margin: 0 auto;"/>	<hr style="width: 50%; margin: 0 auto;"/>
11	7	13	4	9	5	8	12

$\frac{10}{}$	$\frac{B}{12}$	$\frac{E}{4}$	$\frac{3}{}$	$\frac{F}{8}$	$\frac{R}{13}$	$\frac{I}{7}$	$\frac{E}{4}$	$\frac{N}{9}$	$\frac{D}{11}$	$\frac{S}{5}$	$\frac{1}{}$	$\frac{14}{}$	$\frac{2}{}$
---------------	----------------	---------------	--------------	---------------	----------------	---------------	---------------	---------------	----------------	---------------	--------------	---------------	--------------

M	E	A	T	R	I	C	T
8	12	5	14	6	9	9	17
+ 8	- 7	+ 9	- 5	+ 7	+ 6	+ 9	- 9
<hr style="width: 50%; margin: 0 auto;"/>	<hr style="width: 50%; margin: 0 auto;"/>	<hr style="width: 50%; margin: 0 auto;"/>	<hr style="width: 50%; margin: 0 auto;"/>	<hr style="width: 50%; margin: 0 auto;"/>	<hr style="width: 50%; margin: 0 auto;"/>	<hr style="width: 50%; margin: 0 auto;"/>	<hr style="width: 50%; margin: 0 auto;"/>
16	5	14	9	13	15	18	8

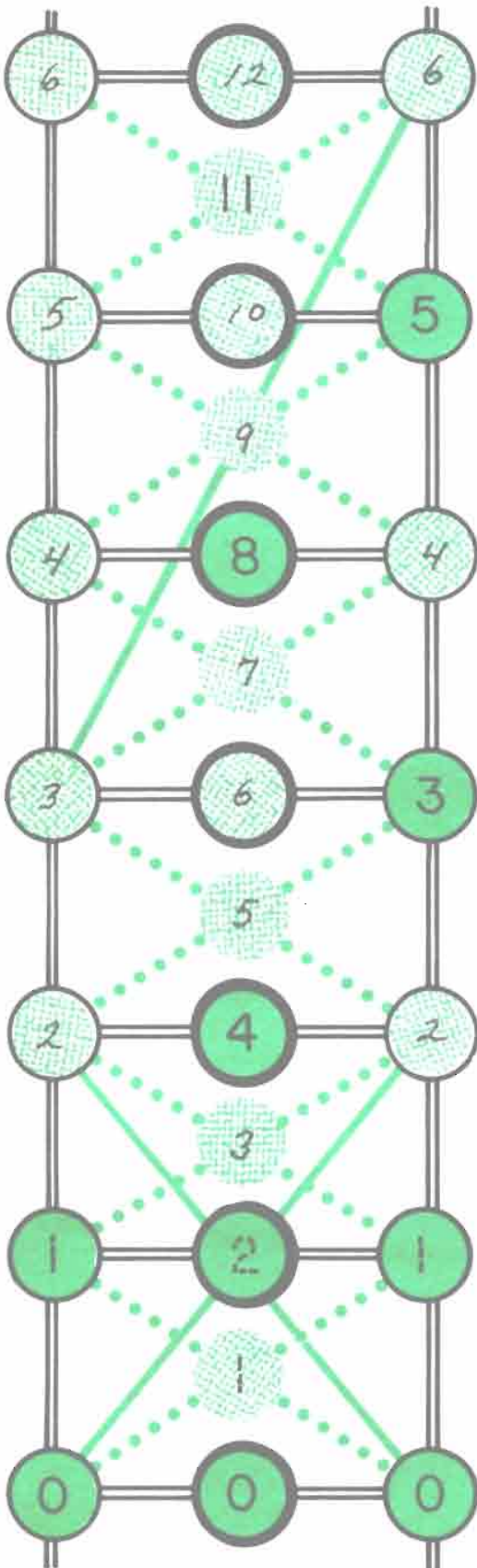
$\frac{12}{}$	$\frac{A}{14}$	$\frac{R}{13}$	$\frac{I}{15}$	$\frac{T}{9}$	$\frac{M}{16}$	$\frac{E}{5}$	$\frac{T}{8}$	$\frac{I}{15}$	$\frac{C}{18}$	$\frac{A}{14}$	$\frac{6}{}$	$\frac{17}{}$	$\frac{10}{}$
---------------	----------------	----------------	----------------	---------------	----------------	---------------	---------------	----------------	----------------	----------------	--------------	---------------	---------------

N	I	C	E	M	D	I	O
16	7	8	5	13	7	6	16
- 9	+ 7	+ 9	+ 7	- 8	+ 8	+ 7	- 8
<hr style="width: 50%; margin: 0 auto;"/>	<hr style="width: 50%; margin: 0 auto;"/>	<hr style="width: 50%; margin: 0 auto;"/>	<hr style="width: 50%; margin: 0 auto;"/>	<hr style="width: 50%; margin: 0 auto;"/>	<hr style="width: 50%; margin: 0 auto;"/>	<hr style="width: 50%; margin: 0 auto;"/>	<hr style="width: 50%; margin: 0 auto;"/>
7	14	17	12	5	15	13	8

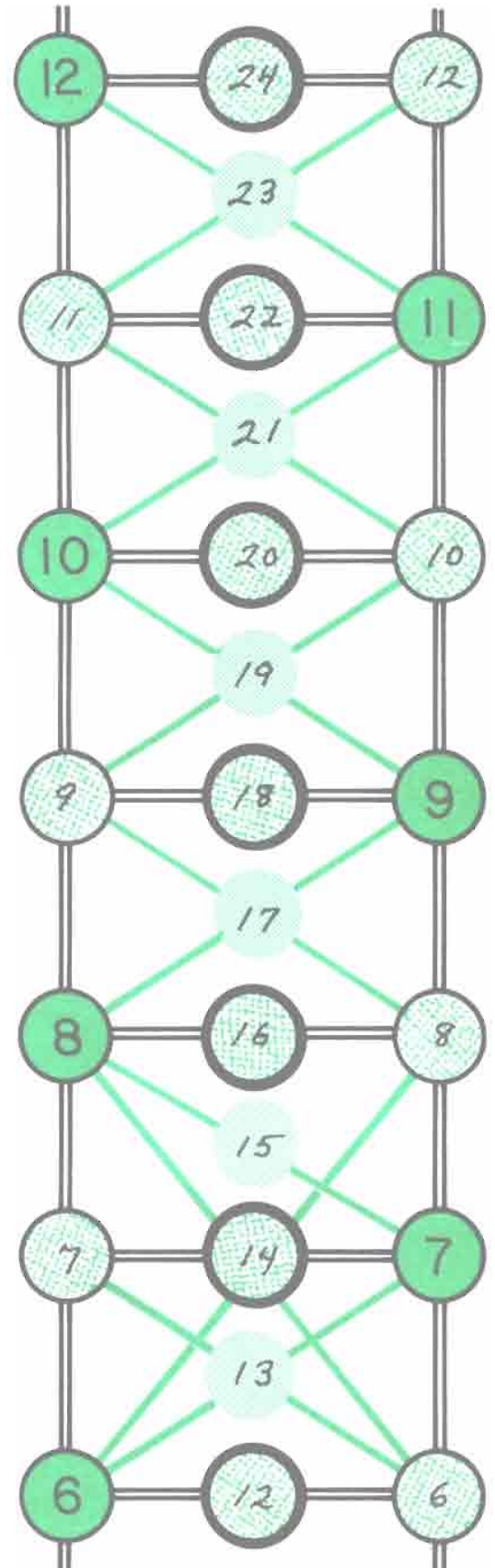
$\frac{1}{}$	$\frac{1}{}$	$\frac{1}{}$	$\frac{1}{}$	$\frac{M}{5}$	$\frac{E}{12}$	$\frac{O}{15}$	$\frac{I}{14}$	$\frac{C}{17}$	$\frac{I}{13}$	$\frac{O}{8}$	$\frac{N}{7}$	$\frac{1}{}$	$\frac{1}{}$
--------------	--------------	--------------	--------------	---------------	----------------	----------------	----------------	----------------	----------------	---------------	---------------	--------------	--------------



Number Ladders

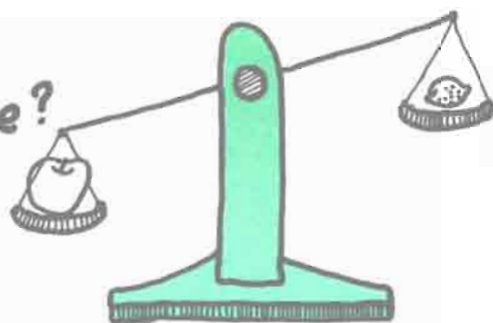


Escaleras de Números



This will be easier if the children start at the bottom of the ladder. Be sure they notice the relationship of the numbers on the "rungs" of the ladder.

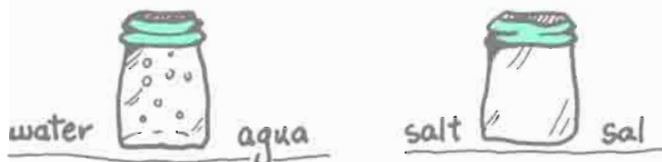
Which weighs more?



¿Cuál pesa más?

A jar of water or a jar of salt?

¿Un frasco de agua o un frasco de sal?



A paper cup of sand or of pebbles?

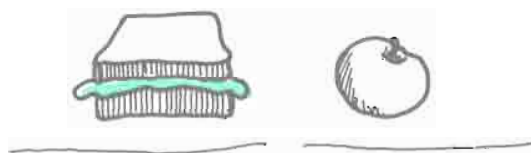
¿Una taza de papel con arena o con piedritas?



Materials needed: a balance scale, 2 identical jars or plastic containers, paper cups, water, salt, sand, pebbles. A discussion prior to the actual comparisons would be quite valuable - to hear predictions, as well as afterwards for reactions and follow-up comparison ideas.

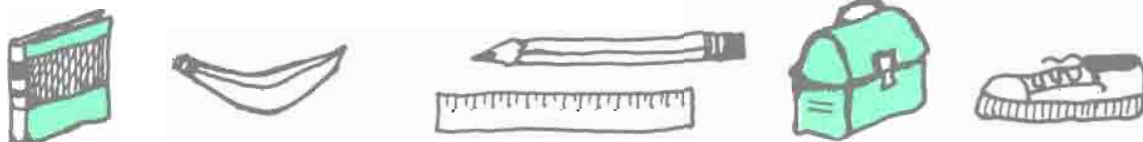
Your sandwich or your apple?

¿Su sandwich o su manzana?

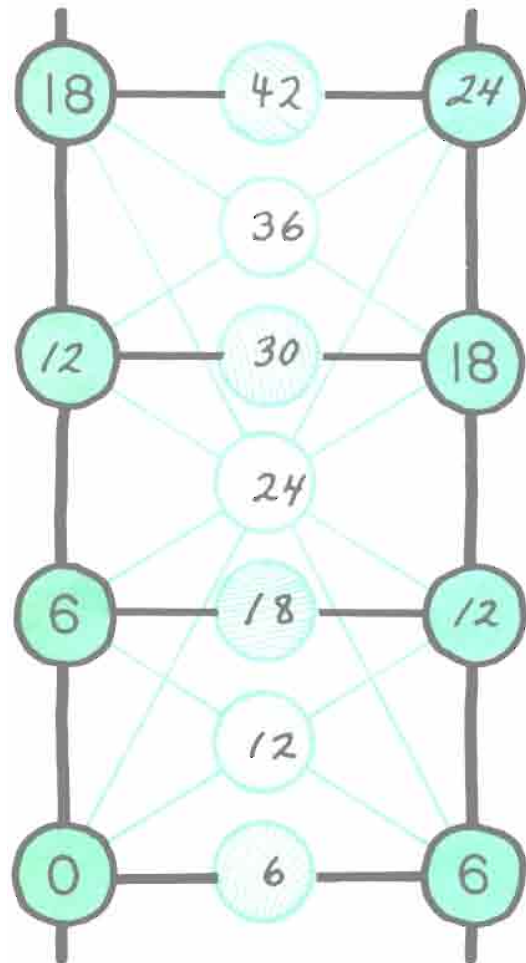
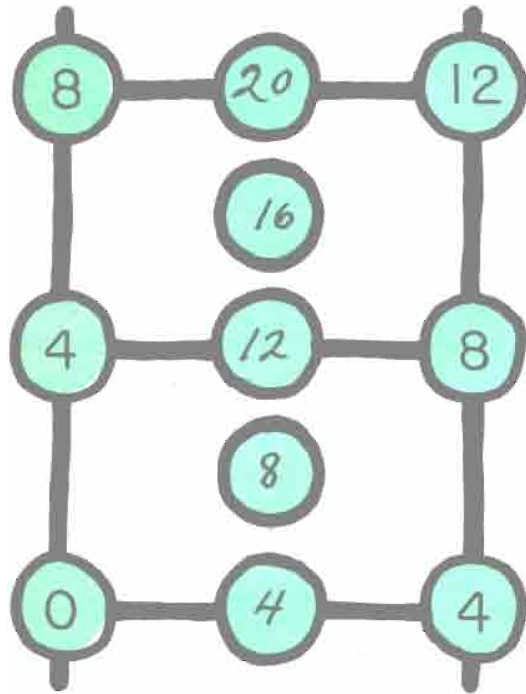


What other things around your room can you compare?

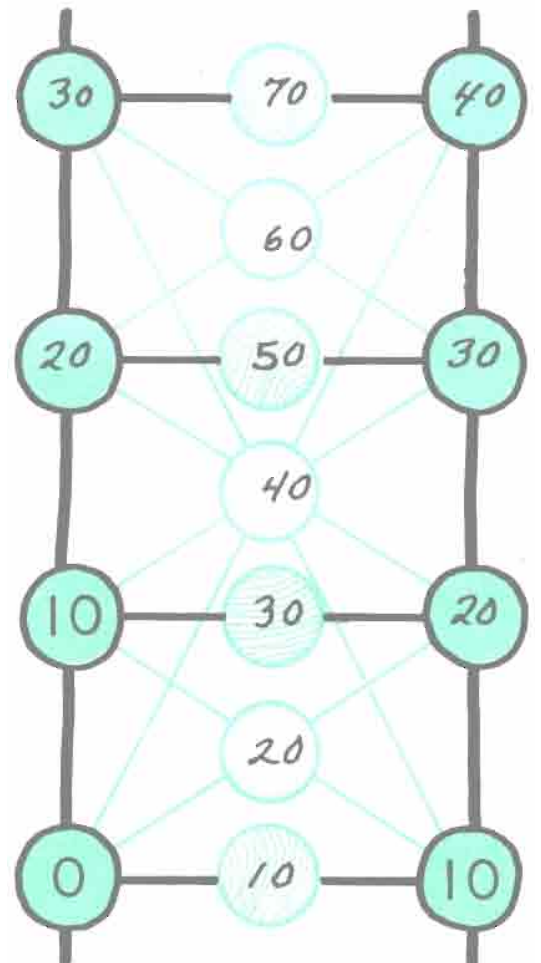
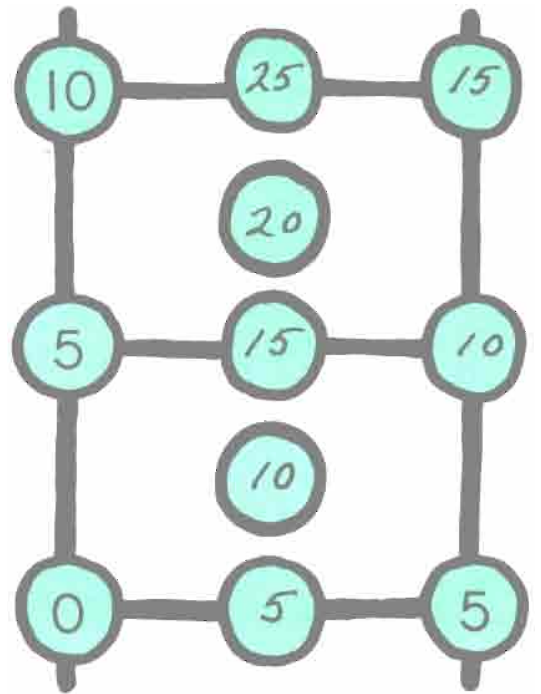
¿Qué otras cosas alrededor de su cuarto puede usted comparar?



Number Ladders



Escalera de Números





ADDITION
SUMAR

Here the child is to add each amount at the side to each amount at the top.



11 ¢

16 ¢

21 ¢



22 ¢

27 ¢

32 ¢



30 ¢

35 ¢

40 ¢

SUBTRACTION
RESTAR

Here the child is to subtract each amount at the side from each amount at the top.



5 ¢

10 ¢

30 ¢



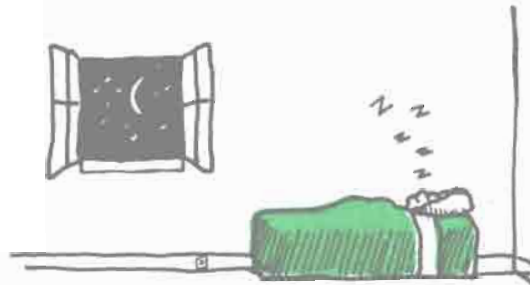
11 ¢

16 ¢

36 ¢

ENCUESTA SOBRE LA HORA DE ACOSTARSE

BEDTIME SURVEY



PLEASE refer the children to pages 77 and 84 for two more valuable and fun "time" pages.

¿ A qué hora se acuesta usted ?

What time do you go to bed ? _____

Pregunte a 3 amigos a qué hora se acuestan .

Ask 3 friends what time they go to bed.

_____ se acuesta más tarde .

_____ stays up the latest .

_____ se acuesta más temprano

_____ goes to bed the earliest .

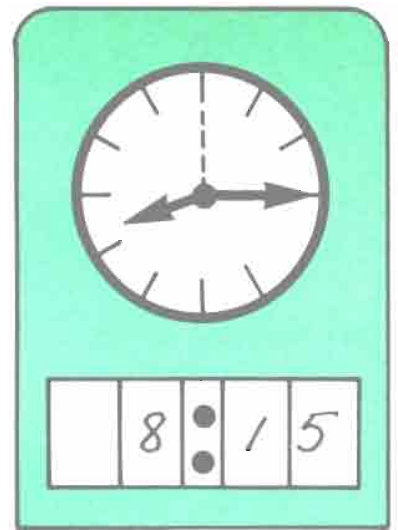
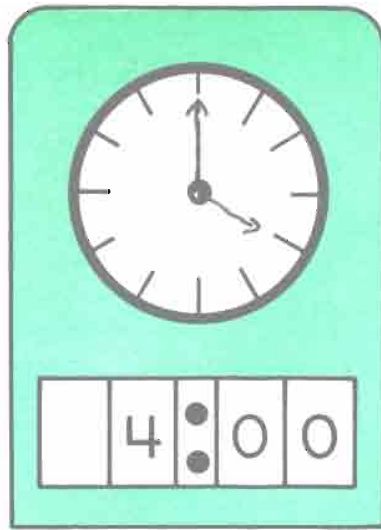
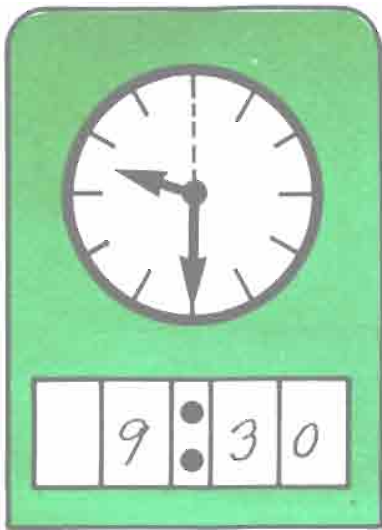
¿ Qué otras encuestas puede usted hacer ?

What other surveys can you make ?

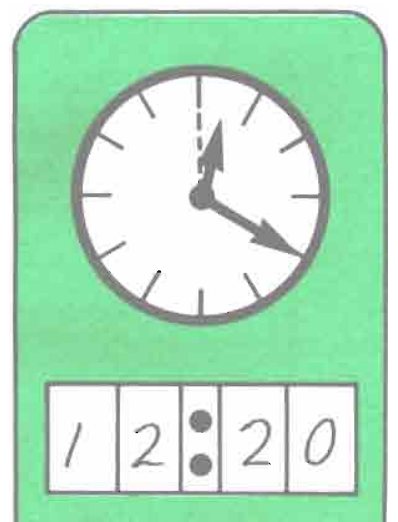
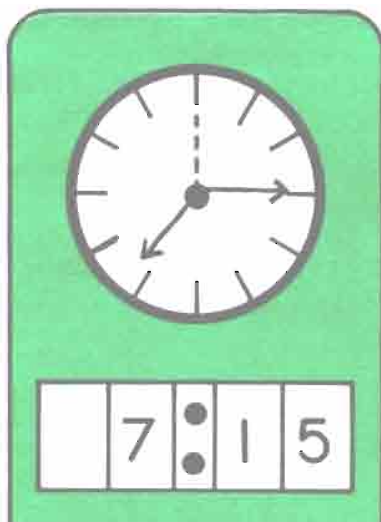
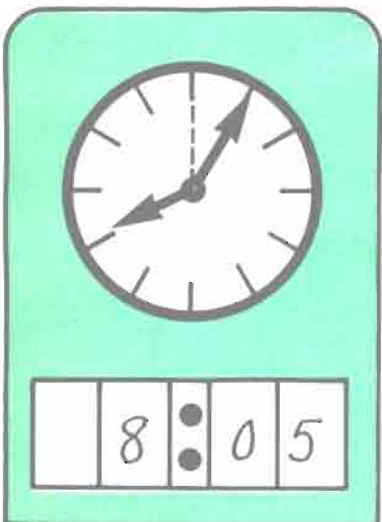
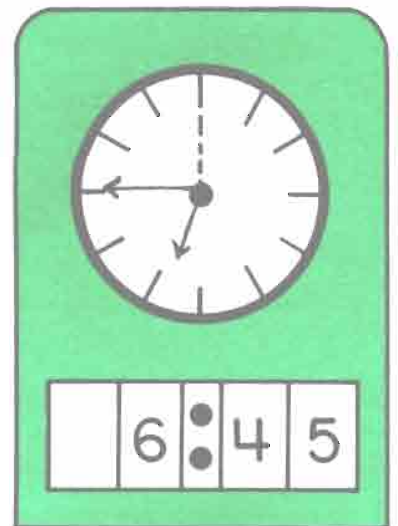
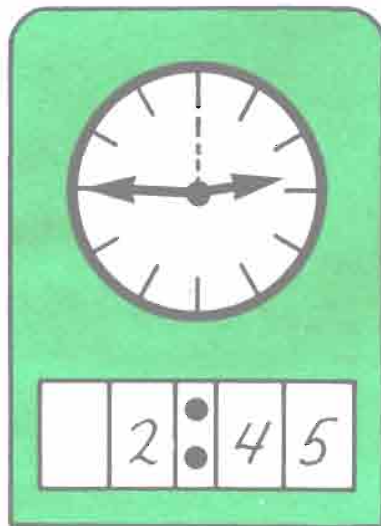
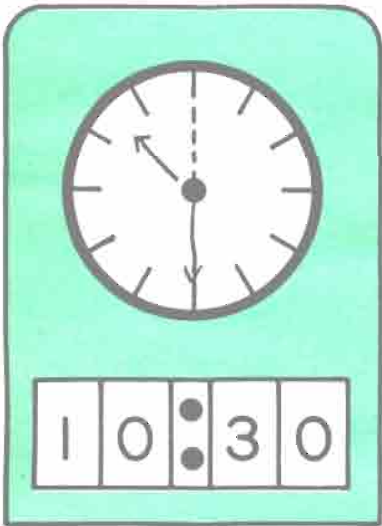
nombre . name

tiempo de la cena
dinnertime






nombre . name	tiempo de la cena dinnertime		
Surveys of friends' different activities involving time can be recorded here: i.e., time to eat dinner, time to get up, etc.			



Refer to page 87 for another like this.



SUBTRACTION
RESTAR

			
- 	<u>7</u> ¢	<u>12</u> ¢	<u>17</u> ¢
- 	<u>11</u> ¢	<u>16</u> ¢	<u>21</u> ¢

	5 ¢	10 ¢	25 ¢
+ 10 ¢	15 ¢	20 ¢	35 ¢
+ 25 ¢	30 ¢	35 ¢	50 ¢
+ 50 ¢	55 ¢	60 ¢	75 ¢

	25 ¢	50 ¢	75 ¢
- 5 ¢	20 ¢	45 ¢	70 ¢
- 10 ¢	15 ¢	40 ¢	65 ¢
- 25 ¢	0 ¢	25 ¢	50 ¢

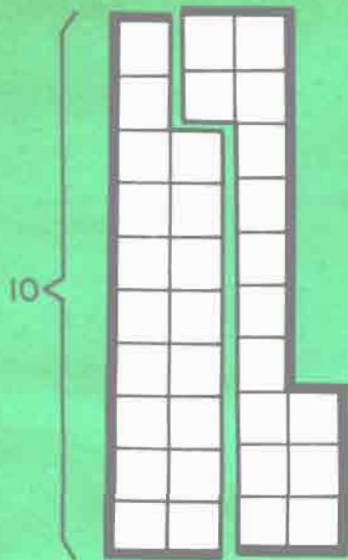
Please make up some examples of your own.

Favor de hacer algunos ejemplos suyos.

	¢	¢	¢
+ ¢	¢	¢	¢
+ ¢	¢	¢	¢

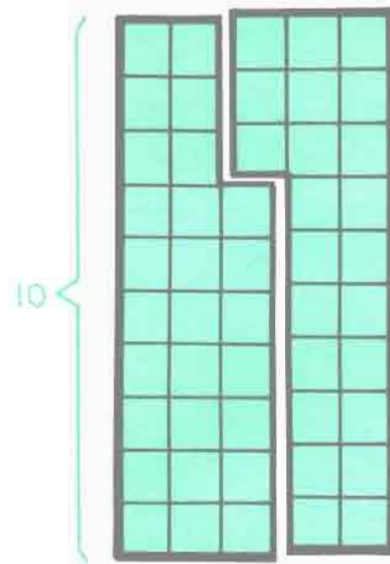
	¢	¢	¢
- ¢	¢	¢	¢
- ¢	¢	¢	¢

What Can You See?

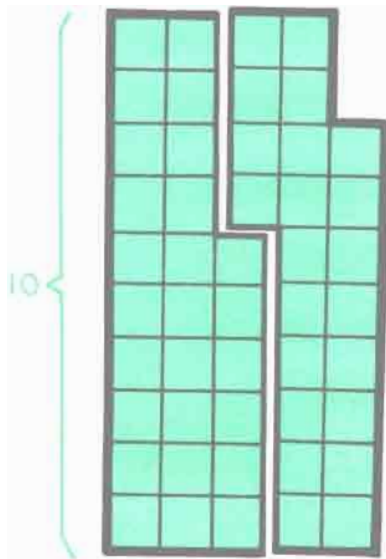


$$\begin{array}{r} 33 \\ - 15 \\ \hline 18 \end{array} \quad \begin{array}{r} 33 \\ - 18 \\ \hline 15 \end{array} \quad \begin{array}{r} 18 \\ + 15 \\ \hline 33 \end{array} \quad \begin{array}{r} 15 \\ + 18 \\ \hline 33 \end{array}$$

¿Qué Puede Usted Ver?

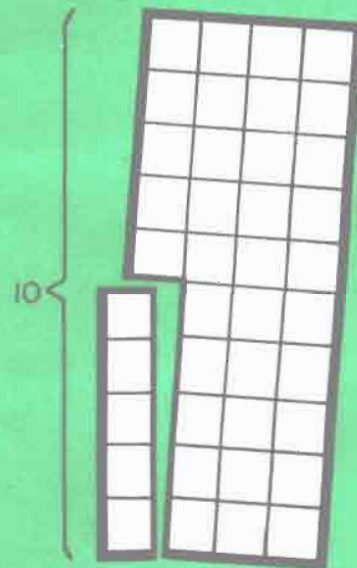


$$\begin{array}{r} 50 \\ - 23 \\ \hline 27 \end{array} \quad \begin{array}{r} 50 \\ - 27 \\ \hline 23 \end{array} \quad \begin{array}{r} 27 \\ + 23 \\ \hline 50 \end{array} \quad \begin{array}{r} 23 \\ + 27 \\ \hline 50 \end{array}$$



See also: D.I. pp. 60-109

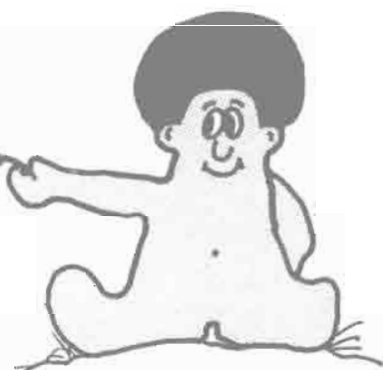
$$\begin{array}{r} 48 \\ - 22 \\ \hline 26 \end{array} \quad \begin{array}{r} 48 \\ - 26 \\ \hline 22 \end{array} \quad \begin{array}{r} 26 \\ + 22 \\ \hline 48 \end{array} \quad \begin{array}{r} 22 \\ + 26 \\ \hline 48 \end{array}$$



$$\begin{array}{r} 40 \\ - 35 \\ \hline 5 \end{array} \quad \begin{array}{r} 40 \\ - 5 \\ \hline 35 \end{array} \quad \begin{array}{r} 35 \\ + 5 \\ \hline 40 \end{array} \quad \begin{array}{r} 5 \\ + 35 \\ \hline 40 \end{array}$$

Here the children are to create four different problems related to the drawing

measuring with steps and hops
midiendo con pasos y brincos



FOR ME THERE ARE: PARA MÍ HAY:

_____ steps from my bed to the kitchen sink.

_____ pasos de mi cama al fregadero de la cocina.

How many hops? _____ ¿cuántos brincos?

_____ steps from the kitchen sink to the front door.

_____ pasos del fregadero de la cocina a la puerta de enfrente.

How many hops? _____ ¿Cuántos brincos?

_____ steps to cross the classroom.

_____ pasos para cruzar la sala de clase.

How many hops? _____ ¿Cuántos brincos?

_____ steps from the school office door to the classroom door.

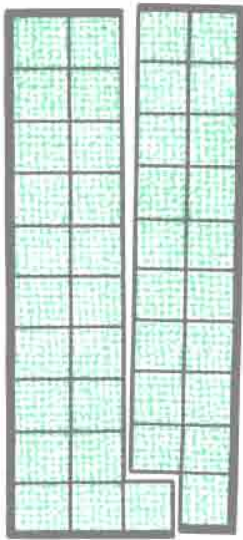
_____ pasos de la puerta de la oficina de la escuela a la
puerta de la sala de clase.

How many hops? _____ ¿Cuántos brincos?

The children will need to take this page home to do part of it. Encourage any other measuring ideas the children will come up with - i.e., small steps vs. big steps, steps between various areas on the playground, in the classroom, etc.



What Can You See?

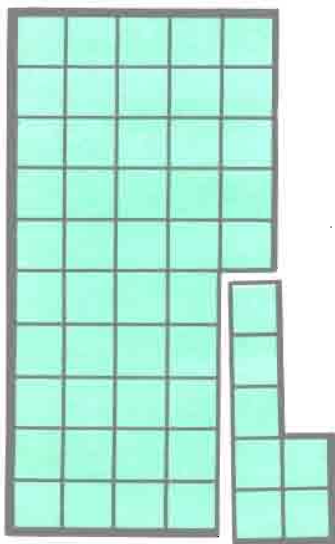


$$\begin{array}{r} 40 \\ - 19 \\ \hline 21 \end{array} \quad \begin{array}{r} 40 \\ - 21 \\ \hline 19 \end{array} \quad \begin{array}{r} 21 \\ + 19 \\ \hline 40 \end{array} \quad \begin{array}{r} 19 \\ + 21 \\ \hline 40 \end{array}$$

¿Qué Puede Usted Ver?

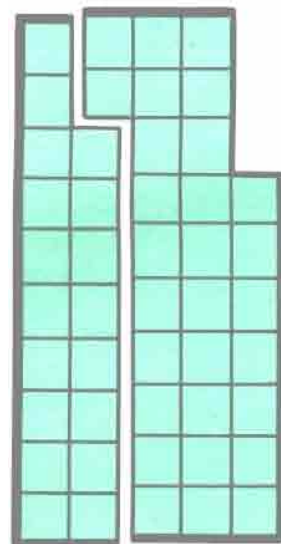


$$\begin{array}{r} 35 \\ - 18 \\ \hline 17 \end{array} \quad \begin{array}{r} 35 \\ - 17 \\ \hline 18 \end{array} \quad \begin{array}{r} 18 \\ + 17 \\ \hline 35 \end{array} \quad \begin{array}{r} 17 \\ + 18 \\ \hline 35 \end{array}$$



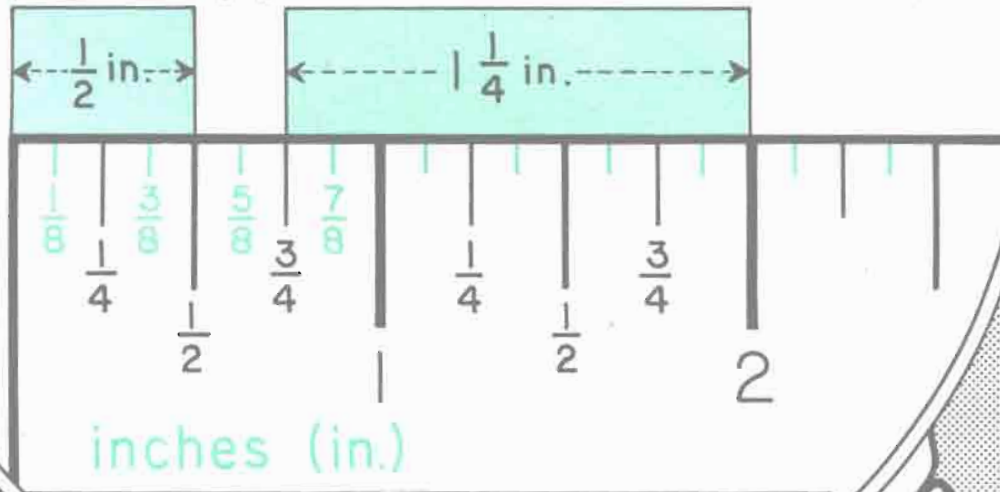
See page 82 for another like this.

$$\begin{array}{r} 52 \\ - 7 \\ \hline 45 \end{array} \quad \begin{array}{r} 52 \\ - 45 \\ \hline 7 \end{array} \quad \begin{array}{r} 45 \\ + 7 \\ \hline 52 \end{array} \quad \begin{array}{r} 7 \\ + 45 \\ \hline 52 \end{array}$$



$$\begin{array}{r} 47 \\ - 29 \\ \hline 18 \end{array} \quad \begin{array}{r} 47 \\ - 18 \\ \hline 29 \end{array} \quad \begin{array}{r} 29 \\ + 18 \\ \hline 47 \end{array} \quad \begin{array}{r} 18 \\ + 29 \\ \hline 47 \end{array}$$

The children can cut out the inches ruler at the bottom for use on this page. They will need to do so carefully because a centimeter ruler is on the opposite side for use on the next page.



1 in.

$1\frac{1}{2}$ in.

$2\frac{1}{4}$ in.

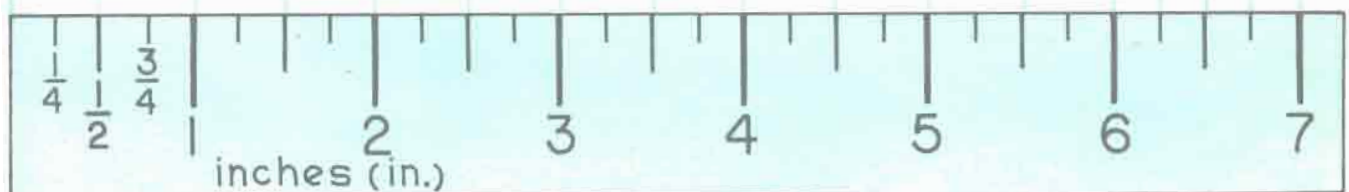
3 in.

2 in.

2 in.

$1\frac{1}{2}$ in.

$1\frac{3}{4}$ in.



From the List!

¡De la Lista!

See page 85 for another like this.

2 (4) 5 (6) (10)

$$\underline{4 + 6 = 10}$$

(3) 4 (6) (9) 11

$$\underline{9 - 3 = 6}$$

Please complete the number sentences using only numbers from the list.

Favor de usar sólo números de la lista para completar las oraciones de números.

Another Rule:

Do not use the same number twice in any one number sentence.

Otra Regla:

No use el mismo número dos veces en ninguna oración de números.

1 2 4 (5) 8 11

$$\underline{1 + 4 = 5}$$

2 3 4 (7) 10 15

$$\underline{7 - 4 = 3}$$

or $\underline{10 - 3 = 7}$

0 3 5 6 7 11

$$\underline{11 - 6 = 5}$$

3 6 8 9 13 14

$$\underline{6 + 8 = 14}$$

or $\underline{6 + 3 = 9}$

4 5 6 7 12 14 15

$$\underline{7 + 5 = 12}$$

4 6 8 9 13 16 18

$$\underline{13 - 4 = 9}$$

1 2 4 5 6 8 10

$$\underline{2 + 4 = 6}$$
$$\underline{8 - 2 = 6}$$
$$\underline{8 + 2 = 10}$$
$$\underline{1 + 4 + 5 = 10}$$

2 3 5 7 9 12 15

$$\underline{5 - 2 = 3}$$
$$\underline{12 + 3 = 15}$$
$$\underline{7 - 2 = 5}$$
$$\underline{3 + 5 + 7 = 15}$$

There are many ways to complete some of the sentences.

Hay muchas maneras de completar algunas de las oraciones.

Rule for this page: loop 2 numbers in the list so their difference is the number on the right.

Regla para esta página: enlace 2 números en la lista de manera que la diferencia sea el número a la derecha.

See also: D&P pp. 136-138B

10 (9) 8 (6) 4 3

$9 - 6 = 3$

10 9 (8) 5 1 2

$10 - 8 = 2$

16 (13) 10 9 (8) 5

$13 - 8 = 5$

(11) 10 9 (4) 1 7

17 (15) 10 (9) 7 6

(19) 18 14 (9) 3 10

23 (15) 8 (6) 4 7

19 (17) 12 (9) 3 8

(25) (19) 13 (10) (4) 15

Please complete these examples in 2 different ways.
Favor de completar estos ejemplos en 2 maneras diferentes.

(10) 8 7 (4) 1 6

(12) 8 (7) 4 2 5

20 (18) 15 (10) 7 8

10 8 (7) 4 (1) 6

12 8 (7) 4 (2) 5

20 18 (15) 10 (7) 8

(16) 14 13 (9) 6 7

(40) 25 (20) 15 5 20

(19) 17 15 (10) 8 9

16 14 (13) 9 (6) 7

40 (25) 20 15 (5) 20
(40) (15 5)

19 (17) 15 10 (8) 9

Please make up examples of your own that can be completed in 2 different ways.
Favor de hacer ejemplos suyos que se puedan completar en 2 maneras diferentes.

[Blank diagram for student example]

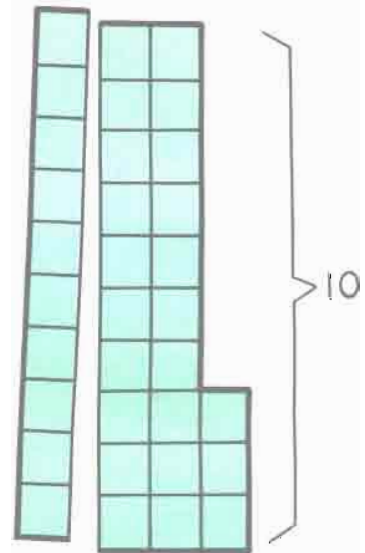
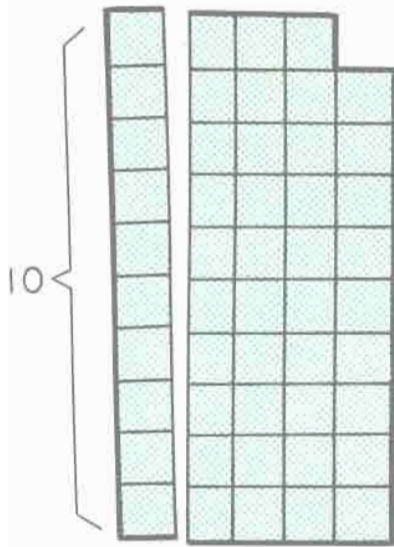
[Blank diagram for student example]

[Blank diagram for student example]

What Can You See?

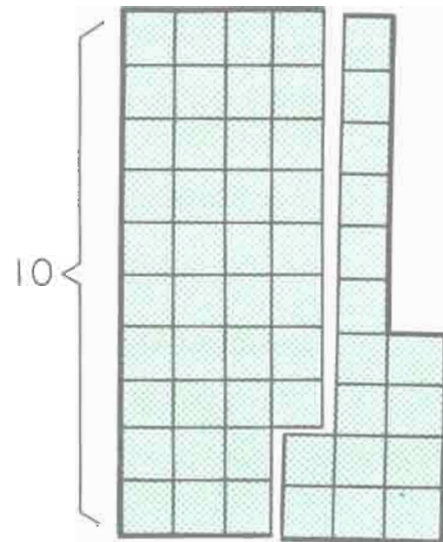
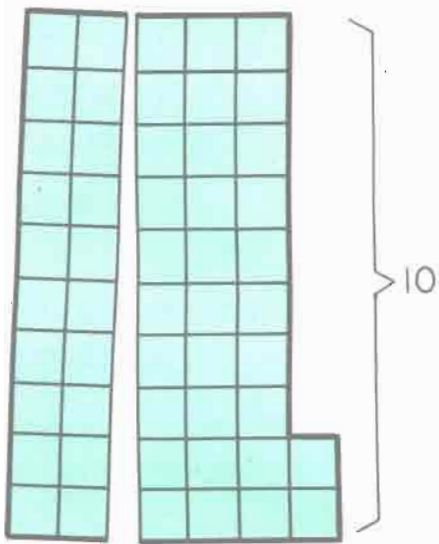
See page 82 for another like this.

¿Qué Puede Usted Ver?



$$\begin{array}{r} 49 \\ - 10 \\ \hline 39 \end{array} \quad \begin{array}{r} 49 \\ - 39 \\ \hline 10 \end{array} \quad \begin{array}{r} 39 \\ + 10 \\ \hline 49 \end{array} \quad \begin{array}{r} 10 \\ + 39 \\ \hline 49 \end{array}$$

$$\begin{array}{r} 33 \\ - 10 \\ \hline 23 \end{array} \quad \begin{array}{r} 33 \\ - 23 \\ \hline 10 \end{array} \quad \begin{array}{r} 23 \\ + 10 \\ \hline 33 \end{array} \quad \begin{array}{r} 10 \\ + 23 \\ \hline 33 \end{array}$$



$$\begin{array}{r} 52 \\ - 20 \\ \hline 32 \end{array} \quad \begin{array}{r} 52 \\ - 32 \\ \hline 20 \end{array} \quad \begin{array}{r} 32 \\ + 20 \\ \hline 52 \end{array} \quad \begin{array}{r} 20 \\ + 32 \\ \hline 52 \end{array}$$

$$\begin{array}{r} 54 \\ - 16 \\ \hline 38 \end{array} \quad \begin{array}{r} 54 \\ - 38 \\ \hline 16 \end{array} \quad \begin{array}{r} 38 \\ + 16 \\ \hline 54 \end{array} \quad \begin{array}{r} 16 \\ + 38 \\ \hline 54 \end{array}$$

Measuring my body

Materials needed: tape measure with inches and/or centimeters, meter stick and/or yard stick. Meter sticks are now widely available.



Midiendo mi cuerpo

my waist is _____ in. _____ cm.
 mi cintura es _____ pg. _____ cm.

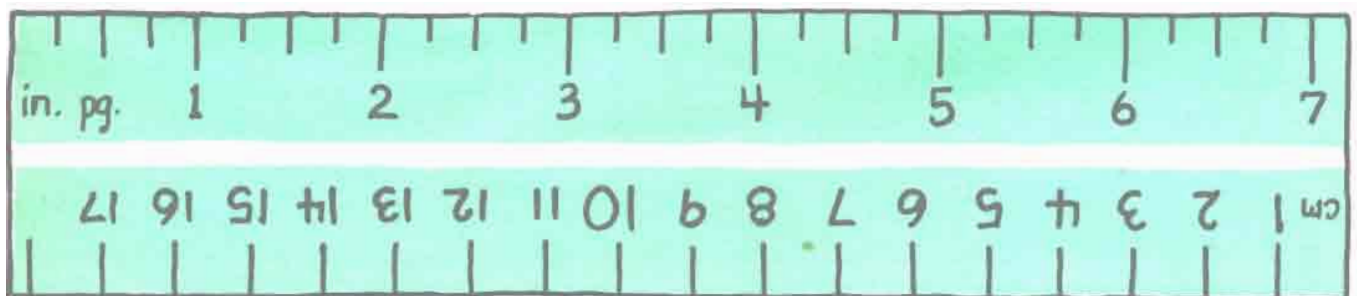
I am _____ in. tall _____ cm tall.
 Yo soy _____ pg. de altura _____ cm de altura.

my wrist is _____ in. _____ cm.
 mi muñeca es _____ pg. _____ cm.

my foot is _____ in. long _____ cm long.
 mi pie es _____ pg. de largo _____ cm de largo.

my hair is _____ in. long _____ cm long.
 mi pelo es _____ pg. de largo _____ cm de largo.

There are _____ in. _____ cm from my right ear to my left.
 Hay _____ pg. _____ cm de mi oreja derecha a mi izquierda.



Patterns in Answers

Muestras en las Respuestas

$$\begin{array}{r} 20 \\ - 8 \\ \hline 12 \end{array} \quad \begin{array}{r} 40 \\ - 6 \\ \hline 34 \end{array} \quad \begin{array}{r} 60 \\ - 4 \\ \hline 56 \end{array} \quad \begin{array}{r} 80 \\ - 2 \\ \hline 78 \end{array}$$

$$\begin{array}{r} 8 \\ + 9 \\ \hline 17 \end{array} \quad \begin{array}{r} 10 \\ + 61 \\ \hline 71 \end{array} \quad \begin{array}{r} 30 \\ - 13 \\ \hline 17 \end{array} \quad \begin{array}{r} 80 \\ - 9 \\ \hline 71 \end{array}$$

$$\begin{array}{r} 15 \\ + 13 \\ \hline 28 \end{array} \quad \begin{array}{r} 50 \\ - 13 \\ \hline 37 \end{array} \quad \begin{array}{r} 29 \\ + 17 \\ \hline 46 \end{array} \quad \begin{array}{r} 70 \\ - 15 \\ \hline 55 \end{array}$$

$$\begin{array}{r} 108 \\ - 32 \\ \hline 76 \end{array} \quad \begin{array}{r} 27 \\ + 27 \\ \hline 54 \end{array} \quad \begin{array}{r} 16 \\ + 16 \\ \hline 32 \end{array} \quad \begin{array}{r} 100 \\ - 90 \\ \hline 10 \end{array}$$

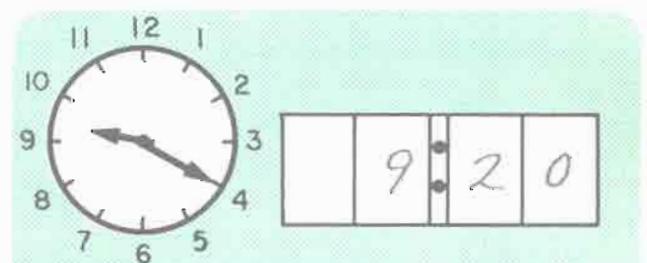
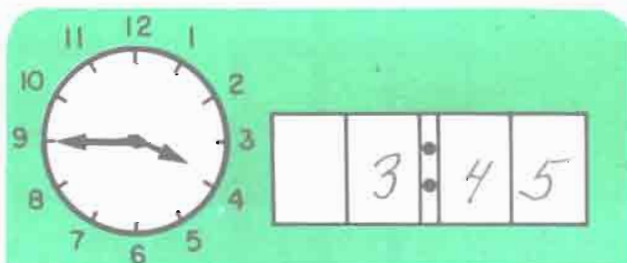
$$\begin{array}{r} 50 \\ - 6 \\ \hline 44 \end{array} \quad \begin{array}{r} 50 \\ - 15 \\ \hline 35 \end{array} \quad \begin{array}{r} 50 \\ - 24 \\ \hline 26 \end{array} \quad \begin{array}{r} 50 \\ - 33 \\ \hline 17 \end{array}$$

$$\begin{array}{r} 30 \\ - 18 \\ \hline 12 \end{array} \quad \begin{array}{r} 40 \\ - 17 \\ \hline 23 \end{array} \quad \begin{array}{r} 50 \\ - 16 \\ \hline 34 \end{array} \quad \begin{array}{r} 60 \\ - 15 \\ \hline 45 \end{array}$$

$$\begin{array}{r} 30 \\ - 24 \\ \hline 6 \end{array} \quad \begin{array}{r} 30 \\ - 18 \\ \hline 12 \end{array} \quad \begin{array}{r} 30 \\ - 12 \\ \hline 18 \end{array} \quad \begin{array}{r} 30 \\ - 6 \\ \hline 24 \end{array}$$

$$\begin{array}{r} 18 \\ - 9 \\ \hline 9 \end{array} \quad \begin{array}{r} 36 \\ - 18 \\ \hline 18 \end{array} \quad \begin{array}{r} 54 \\ - 27 \\ \hline 27 \end{array} \quad \begin{array}{r} 72 \\ - 36 \\ \hline 36 \end{array}$$

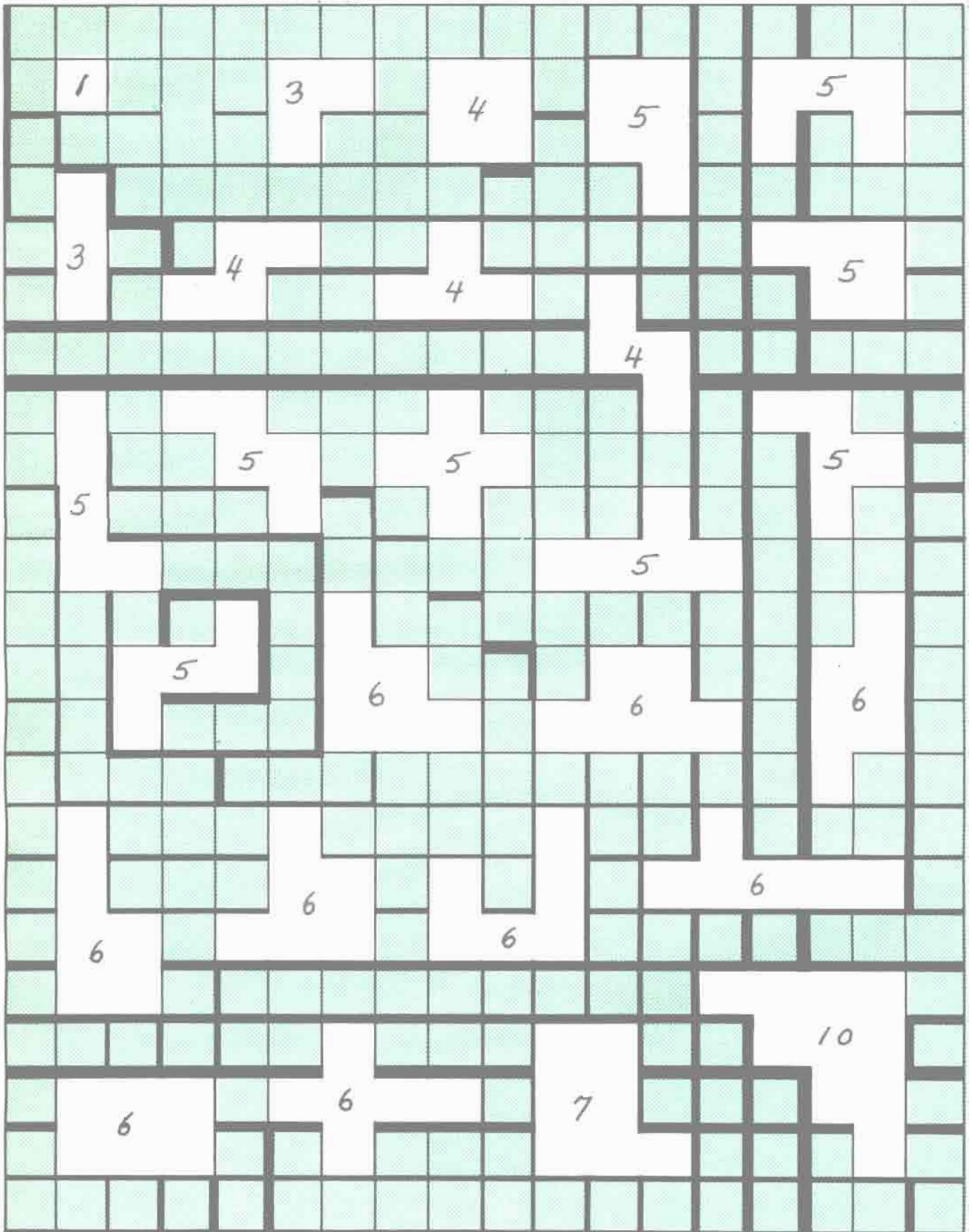
It might be a good idea for the children to discuss this poem after they do it.



How many blocks are not colored?

¿Cuántos cuadros no están pintados de color?

See page 86 for another like this.



TELÉFONO

TELEPHONE

Mi número de teléfono es _____

My phone number is _____

La suma de todas las cifras es _____

The sum of all the digits is _____



Los números de teléfono de cuatro de mis amigos son:

Four of my friends' phone numbers are:

nombre

name

el número de teléfono

phone number

nombre	name	el número de teléfono	phone number

¿ De quién son las cifras cuyos números suman más ?

Whose digits add up to the biggest number ? _____

¿ De quién son las cifras cuyos números suman menos ?

Whose digits add up to the smallest number ? _____

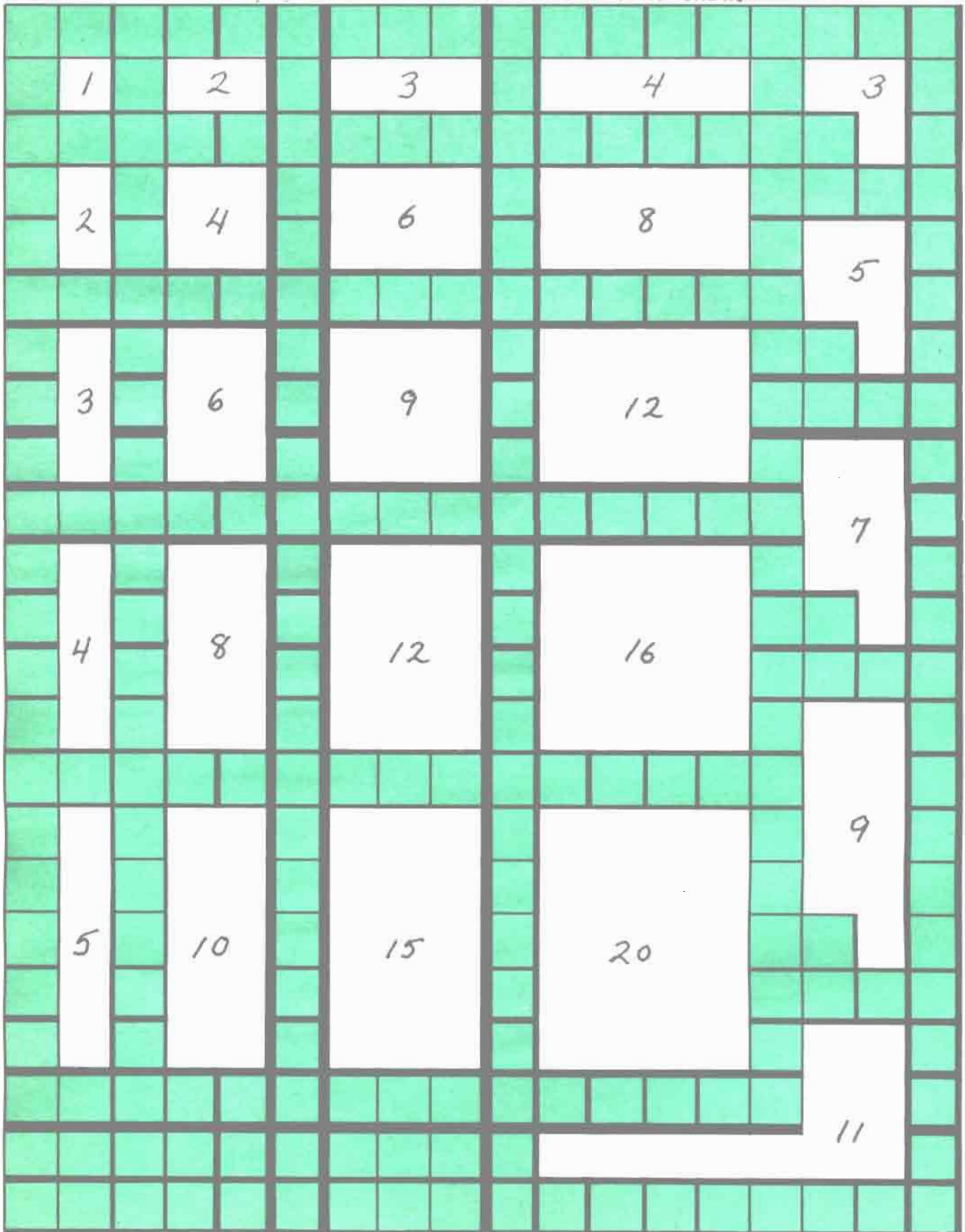
¿ Para llamar a todos los 4 amigos en una mañana,
cuántos cifras tendría que marcar ? _____

To call 4 friends in one morning how many
digits would you have to dial ? _____

How many blocks are not colored?

¿Cuántos cuadros no están pintados de color?

See pages 85 and 88 for others like this.



From the List:

No numbers are to be repeated
in any one example.

De la Lista:

Ningún número debe de repetirse
en ningún ejemplo.

Directions on page 33.

2 (4) (6) 8 (10) 12 14 16

$$\begin{array}{r} 4 + 6 = 10 \\ \hline \end{array}$$

$$\begin{array}{r} 4 + 2 = 6 \\ \hline \end{array}$$

$$\begin{array}{r} 12 + 4 = 16 \\ \hline \end{array}$$

1 3 5 7 9 11 12

$$\begin{array}{r} 5 + 7 = 12 \\ \hline \end{array}$$

$$\begin{array}{r} 9 + 3 = 12 \\ \hline \end{array}$$

$$\begin{array}{r} 11 + 1 = 12 \\ \hline \end{array}$$

See pages 85 and 88 for another like this.

3 4 5 6 7 8 9 10 11

$$\begin{array}{r} 11 - 4 = 7 \\ \hline \end{array}$$

$$\begin{array}{r} 10 - 3 = 7 \\ \hline \end{array}$$

$$\begin{array}{r} 9 - 4 = 5 \\ \hline \end{array}$$

3 6 9 12 15 18 21

$$\begin{array}{r} 21 - 6 = 15 \\ \hline \end{array}$$

$$\begin{array}{r} 15 - 9 = 6 \\ \hline \end{array}$$

$$\begin{array}{r} 12 - 9 = 3 \\ \hline \end{array}$$

The answers given are possibilities.

2 3 4 5 6 7 8 9 10

$$\begin{array}{r} 6 + 4 = 10 \\ \hline \end{array}$$

$$\begin{array}{r} 9 - 7 = 2 \\ \hline \end{array}$$

$$\begin{array}{r} 2 + 3 + 5 = 10 \\ \hline \end{array}$$

$$\begin{array}{r} 10 + 2 - 3 = 9 \\ \hline \end{array}$$

0 2 4 6 8 10 12 14 16

$$\begin{array}{r} 4 + 2 = 6 \\ \hline \end{array}$$

$$\begin{array}{r} 14 - 6 = 8 \\ \hline \end{array}$$

$$\begin{array}{r} 2 + 4 + 6 = 12 \\ \hline \end{array}$$

$$\begin{array}{r} 10 + 2 - 4 = 8 \\ \hline \end{array}$$

2 4 6 8 10 12 14 16

$$\begin{array}{r} 10 + 6 = 16 \\ \hline \end{array}$$

$$\begin{array}{r} 14 = 8 + 6 \\ \hline \end{array}$$

$$\begin{array}{r} 10 = 16 - 6 \\ \hline \end{array}$$

$$\begin{array}{r} 8 + 2 = 4 + 6 \\ \hline \end{array}$$

$$\begin{array}{r} 8 + 2 = 16 - 6 \\ \hline \end{array}$$

1 3 5 7 9 10 11 13 15

$$\begin{array}{r} 13 = 10 + 3 \\ \hline \end{array}$$

$$\begin{array}{r} 10 = 15 - 5 \\ \hline \end{array}$$

$$\begin{array}{r} 15 - 5 = 3 + 7 \\ \hline \end{array}$$

$$\begin{array}{r} 7 - 3 = 9 - 5 \\ \hline \end{array}$$

$$\begin{array}{r} 9 + 1 = 7 + 3 \\ \hline \end{array}$$

From the List:

No numbers are to be repeated
in any one example.

De la Lista:

Ningún número debe de repetirse
en ningún ejemplo.

The children may want to have their
beans handy to try this out.

2, 3, 4, 5, 6, 7

1, 3, 5, 7, 9, 11

$$\begin{array}{r} 7 \\ \hline 3 \\ \hline + 2 \\ \hline 12 \end{array}$$

$$\begin{array}{r} 6 \\ \hline 4 \\ \hline + 2 \\ \hline 12 \end{array}$$

$$\begin{array}{r} 5 \\ \hline 4 \\ \hline + 3 \\ \hline 12 \end{array}$$

$$\begin{array}{r} 11 \\ \hline 3 \\ \hline + 1 \\ \hline 15 \end{array}$$

$$\begin{array}{r} 9 \\ \hline 5 \\ \hline + 1 \\ \hline 15 \end{array}$$

$$\begin{array}{r} 7 \\ \hline 5 \\ \hline + 3 \\ \hline 15 \end{array}$$

See page 90 for another like this.

$$\begin{array}{r} 7 \\ \hline 4 \\ \hline + 2 \\ \hline 13 \end{array}$$

$$\begin{array}{r} 6 \\ \hline 5 \\ \hline + 2 \\ \hline 13 \end{array}$$

$$\begin{array}{r} 6 \\ \hline 4 \\ \hline + 3 \\ \hline 13 \end{array}$$

$$\begin{array}{r} 11 \\ \hline 5 \\ \hline + 1 \\ \hline 17 \end{array}$$

$$\begin{array}{r} 9 \\ \hline 5 \\ \hline + 3 \\ \hline 17 \end{array}$$

$$\begin{array}{r} 9 \\ \hline 7 \\ \hline + 1 \\ \hline 17 \end{array}$$

$$\begin{array}{r} 7 \\ \hline 5 \\ \hline + 2 \\ \hline 14 \end{array}$$

$$\begin{array}{r} 7 \\ \hline 4 \\ \hline + 3 \\ \hline 14 \end{array}$$

$$\begin{array}{r} 6 \\ \hline 5 \\ \hline + 3 \\ \hline 14 \end{array}$$

$$\begin{array}{r} 11 \\ \hline 5 \\ \hline + 3 \\ \hline 19 \end{array}$$

$$\begin{array}{r} 9 \\ \hline 7 \\ \hline + 3 \\ \hline 19 \end{array}$$

$$\begin{array}{r} 11 \\ \hline 7 \\ \hline + 1 \\ \hline 19 \end{array}$$

$$\begin{array}{r} 7 \\ \hline 5 \\ \hline + 3 \\ \hline 15 \end{array}$$

$$\begin{array}{r} 7 \\ \hline 6 \\ \hline + 2 \\ \hline 15 \end{array}$$

$$\begin{array}{r} 6 \\ \hline 5 \\ \hline + 4 \\ \hline 15 \end{array}$$

$$\begin{array}{r} 11 \\ \hline 9 \\ \hline + 1 \\ \hline 21 \end{array}$$

$$\begin{array}{r} 11 \\ \hline 7 \\ \hline + 3 \\ \hline 21 \end{array}$$

$$\begin{array}{r} 9 \\ \hline 7 \\ \hline + 5 \\ \hline 21 \end{array}$$

¿Cómo van los niños de su clase a la escuela?

How do the children in your class go to school?

autobús



bus

caminan



walk

bicicleta



bicycle

carro



car

You may need to make a large class tally sheet and graph if the children are not yet familiar with graphing. In any case, it is important to discuss how the graphs are read -- both over and up, and up and over -- this will become more important as they do the graphing on the matrices later in the book. PLEASE refer the children to the other "fun" graph on page 89. You can also encourage them to think of other data to collect and graph on their own -- i.e., areas of town or streets where classmates live, birthday months, parents' birthday months, etc.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18



1¢



5¢



10¢



25¢

Use number of coins shown.

Use la cantidad de monedas mostradas.

See page 91 for another like this. See also: D&P pp. 150-165

7¢

5¢ 1¢ 1¢

12¢

5¢ 5¢ 1¢ 1¢

11¢

5¢ 5¢ 1¢

21¢

10¢ 5¢ 5¢ 1¢

12¢

10¢ 1¢ 1¢

22¢

10¢ 10¢ 1¢ 1¢

21¢

10¢ 10¢ 1¢

28¢

25¢ 1¢ 1¢ 1¢

18¢

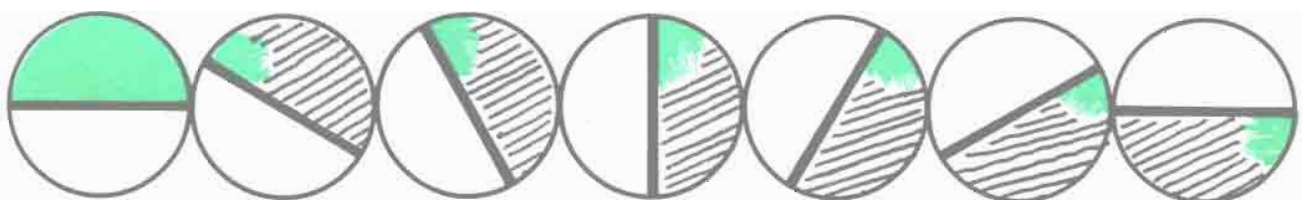
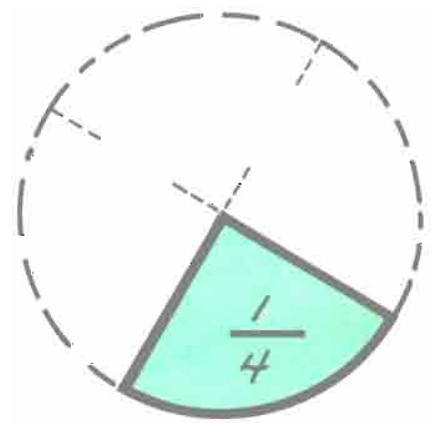
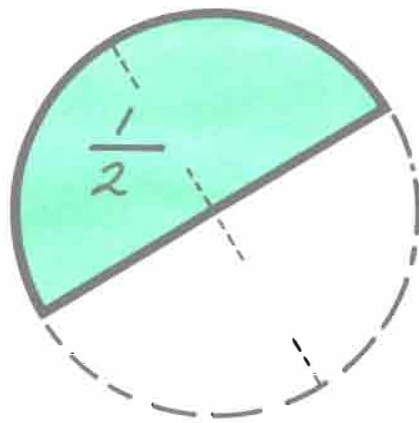
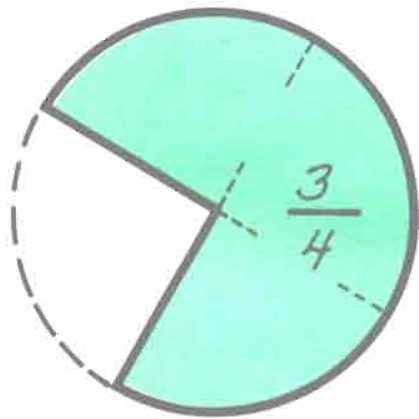
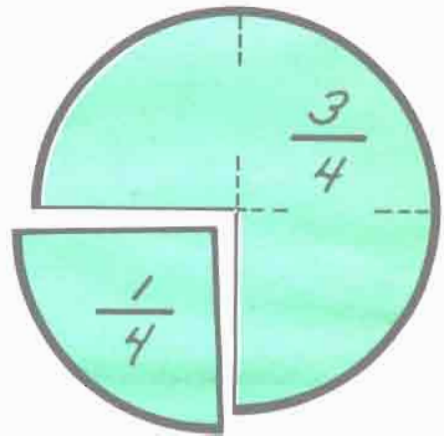
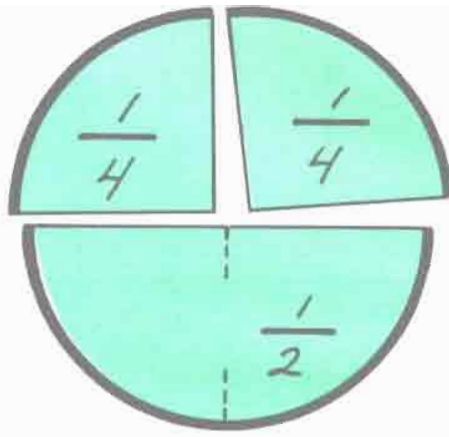
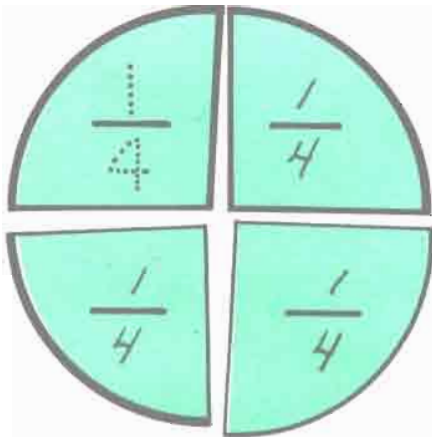
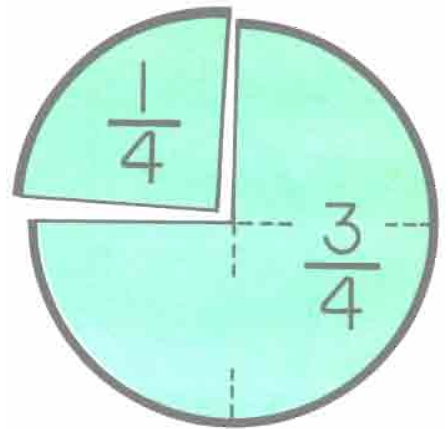
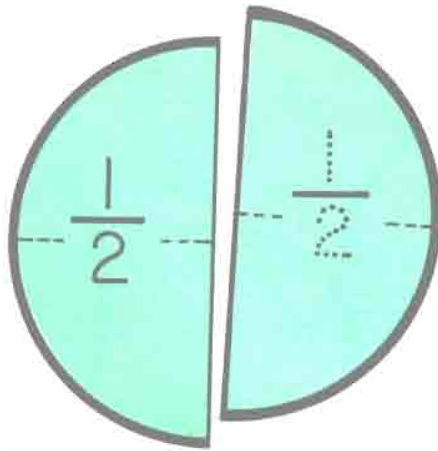
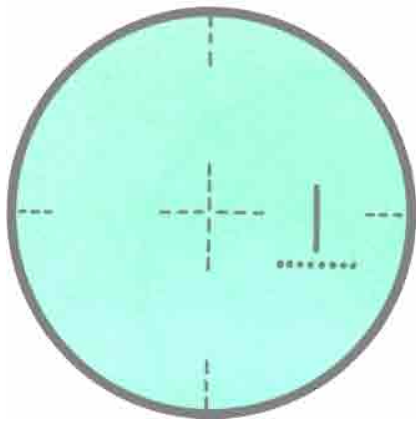
5¢ 5¢ 5¢ 1¢ 1¢ 1¢

27¢

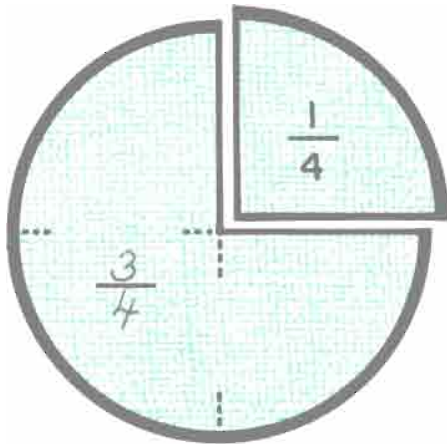
10¢ 5¢ 5¢ 5¢ 1¢ 1¢

28¢

10¢ 10¢ 5¢ 1¢ 1¢ 1¢



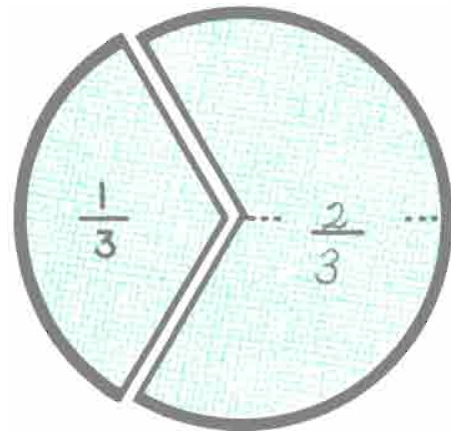
What Can You See?



$$1 - \frac{1}{4} = \frac{3}{4} \quad \frac{1}{4} + \frac{3}{4} = \frac{4}{4} = 1$$

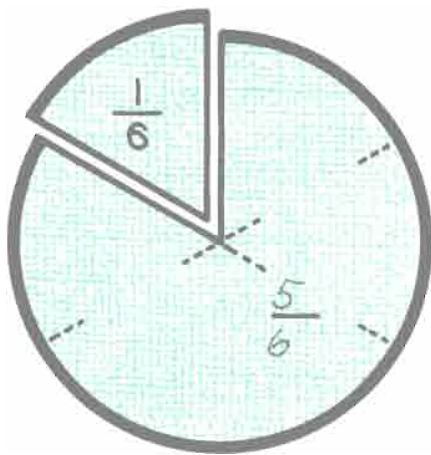
$$\frac{1}{2} + \frac{1}{4} = \frac{3}{4} \quad \frac{3}{4} - \frac{1}{4} = \frac{2}{4} = \frac{1}{2}$$

¿Qué Puede Usted Ver?



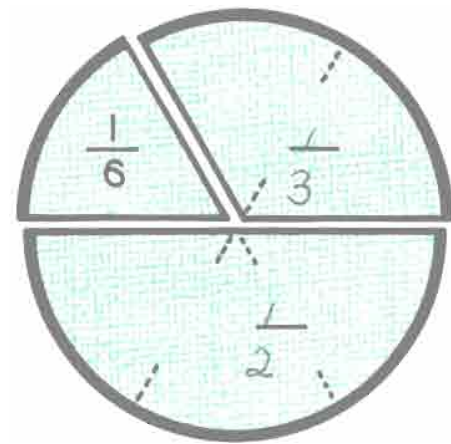
$$1 - \frac{2}{3} = \frac{1}{3} \quad \frac{1}{3} + \frac{2}{3} = \frac{3}{3} = 1$$

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



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

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



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

$$\frac{1}{2} + \frac{1}{3} = \frac{5}{6} \quad \frac{1}{2} + \frac{1}{6} = \frac{2}{3}$$

Weighing myself



Pesándome yo mismo

Materials needed: a bathroom scale

When I arrived at school this morning, I weighed _____ lbs.

Cuando yo llegaba a la escuela esta mañana, yo me pesaba _____ lbs.

After lunch I weighed _____ lbs.

Después de la comida yo me pesaba _____ lbs.

With my shoes off I weigh _____ lbs.

Sin mis zapatos yo me peso _____ lbs.

Please weigh yourself and 2 friends separately.

Favor de pesarse usted y dos otras personas separadamente.

_____ lbs. + _____ lbs. + _____ lbs. = _____ lbs.
me • yo friend amigo total
 amigo friend

Now try all 3 of you on the scale at the same time and see if it reads the same total.

Ahora pésense ustedes 3 al mismo y vean si da el mismo total.





See also: D&P pp. 156-165

Use number of coins shown.

Use la cantidad de monedas mostradas.

20¢ 10¢ 5¢ 5¢ 40¢ 25¢ 5¢ 5¢ 5¢

25¢ 10¢ 10¢ 5¢ 45¢ 25¢ 10¢ 5¢ 5¢

30¢ 10¢ 10¢ 10¢ 50¢ 25¢ 10¢ 10¢ 5¢

35¢ 25¢ 5¢ 5¢ 55¢ 25¢ 10¢ 10¢ 10¢

60¢ 25¢ 10¢ 10¢ 5¢ 5¢ 5¢

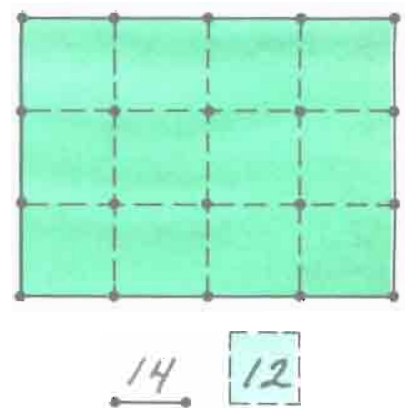
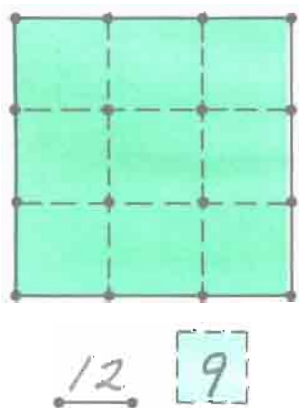
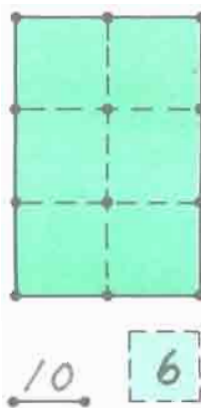
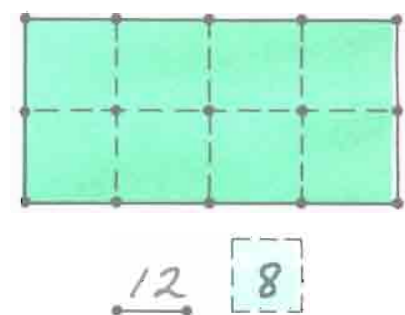
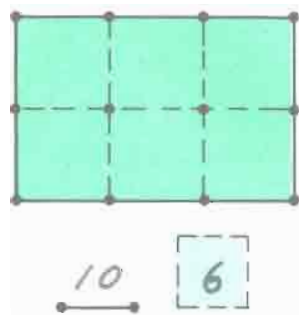
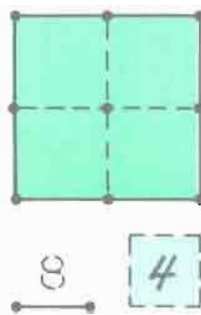
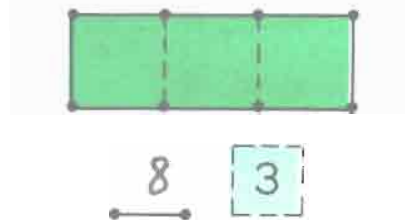
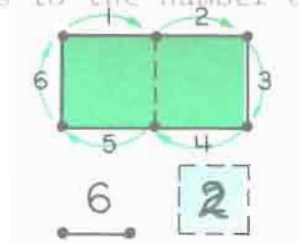
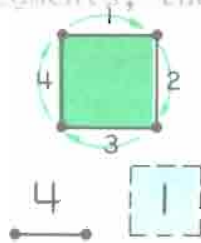
65¢ 25¢ 10¢ 10¢ 10¢ 5¢ 5¢

70¢ 25¢ 10¢ 10¢ 10¢ 10¢ 5¢
 or 25 25 5 5 5 5

What Do You See?

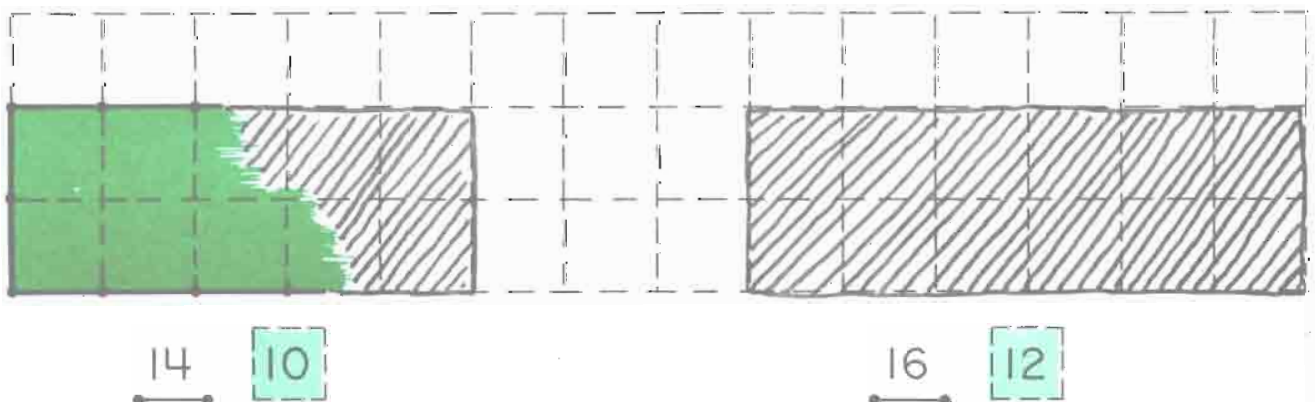
¿Qué Ve Usted?

Here the children are to count the line segments around the perimeter to find out how many there are. The 4 refers to the number of line segments, the 1 refers to the number of squares in the first example.



Please draw the sketches.

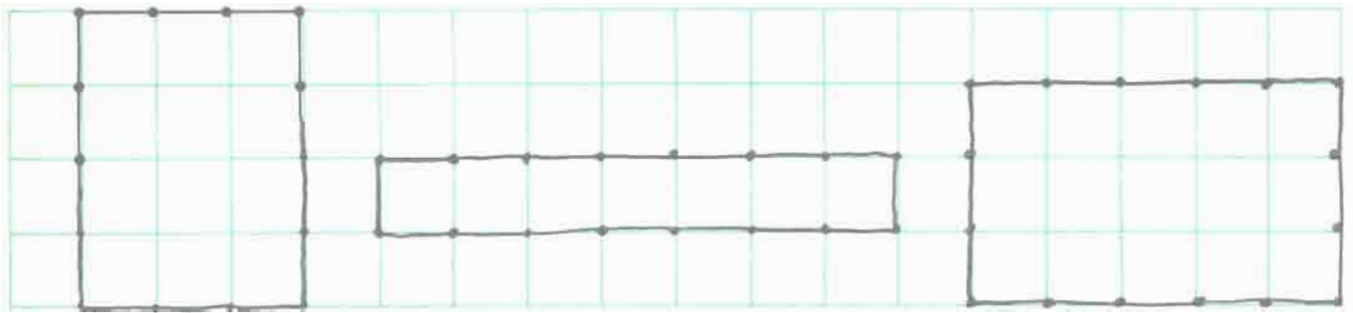
Favor de hacer los dibujos.



Please draw the sketches

Favor de hacer los dibujos.

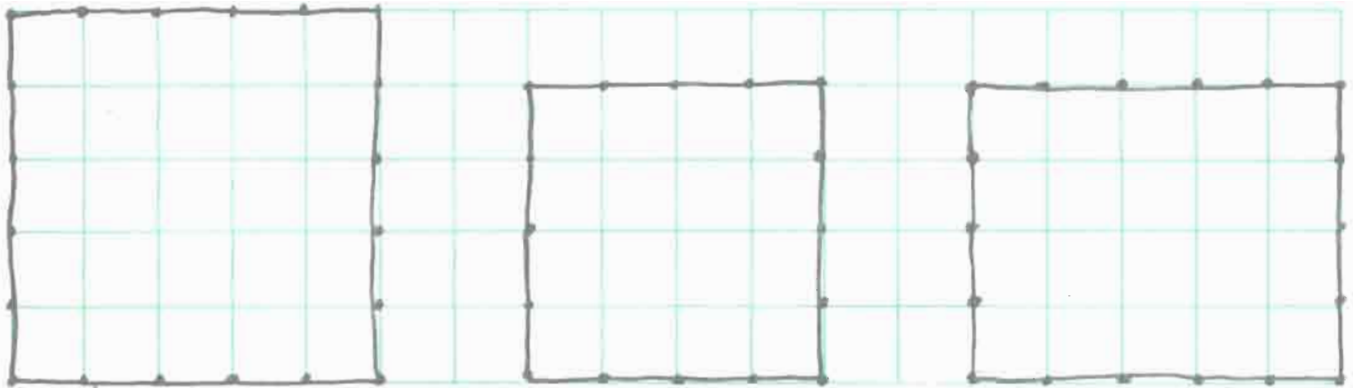
See page 92 for another like this.



14 12

16 7

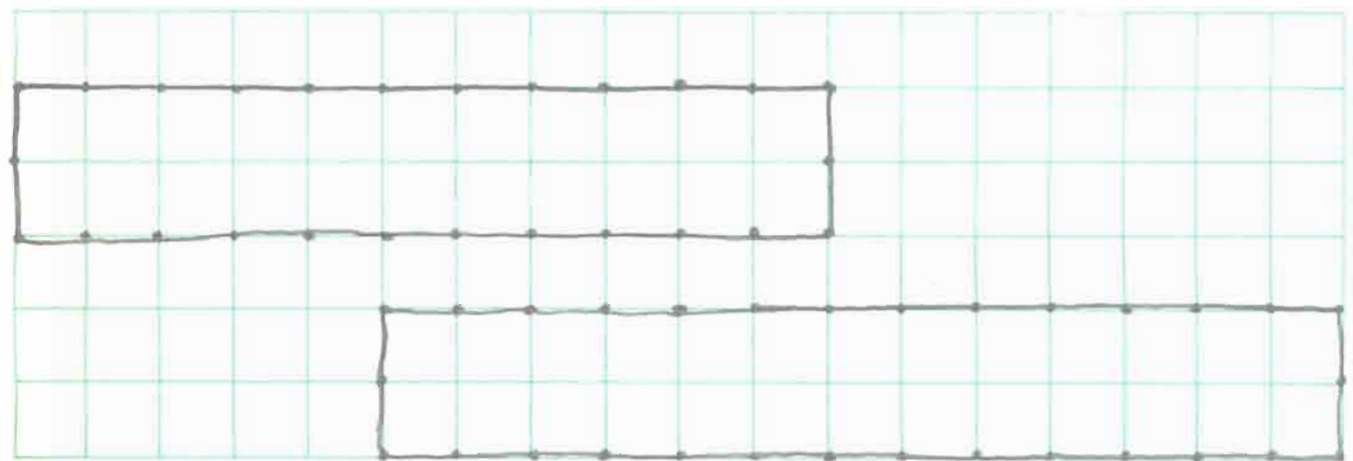
16 15



20 25

16 16

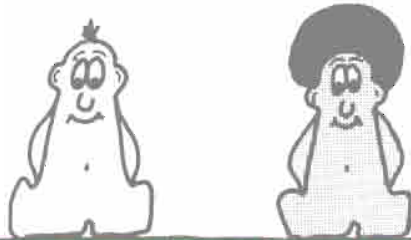
18 20



26 22

30 26

meters
and
Centimeters



metros
Y
Centímetros



one meter = 100 centimeters (cm)

un metro = 100 centímetros (cm)

Materials needed: meter sticks

Our classroom is _____ meters wide.
Nuestra sala de clase es _____ metros de ancho.

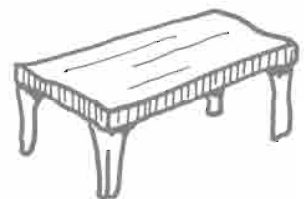
The chalkboard is _____ cm long.
La pizarra es _____ cm de largo.

The door is _____ cm wide.
La puerta es _____ cm de ancho.



The table is _____ cm long.
La mesa es _____ cm de largo.

The table is _____ cm wide.
La mesa es _____ cm de ancho.

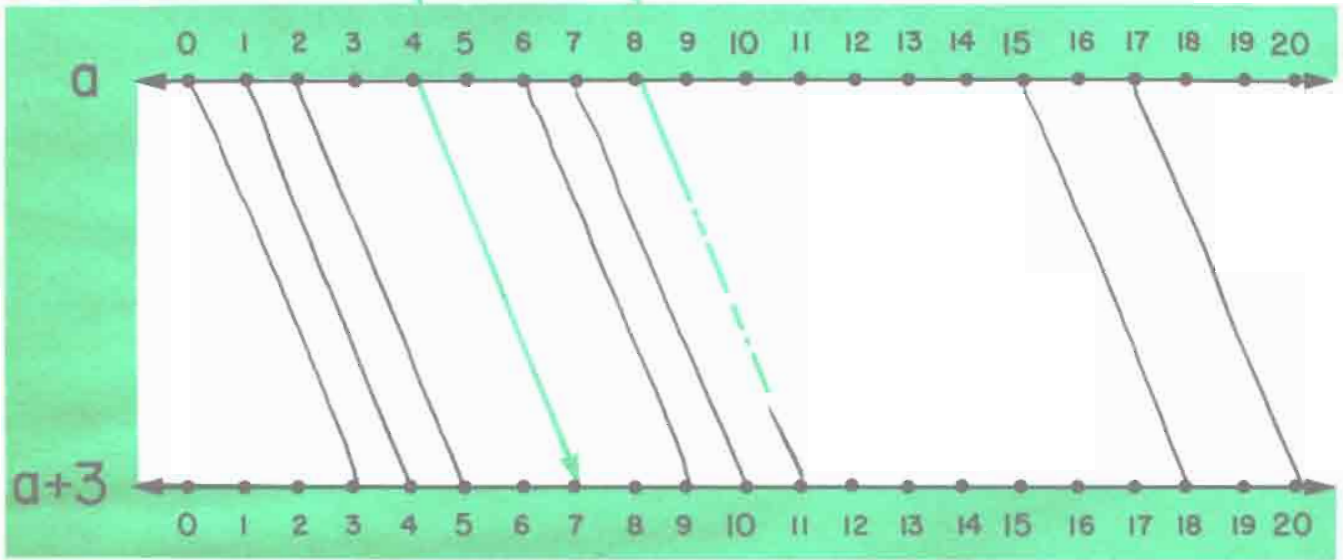


Now
Ahora

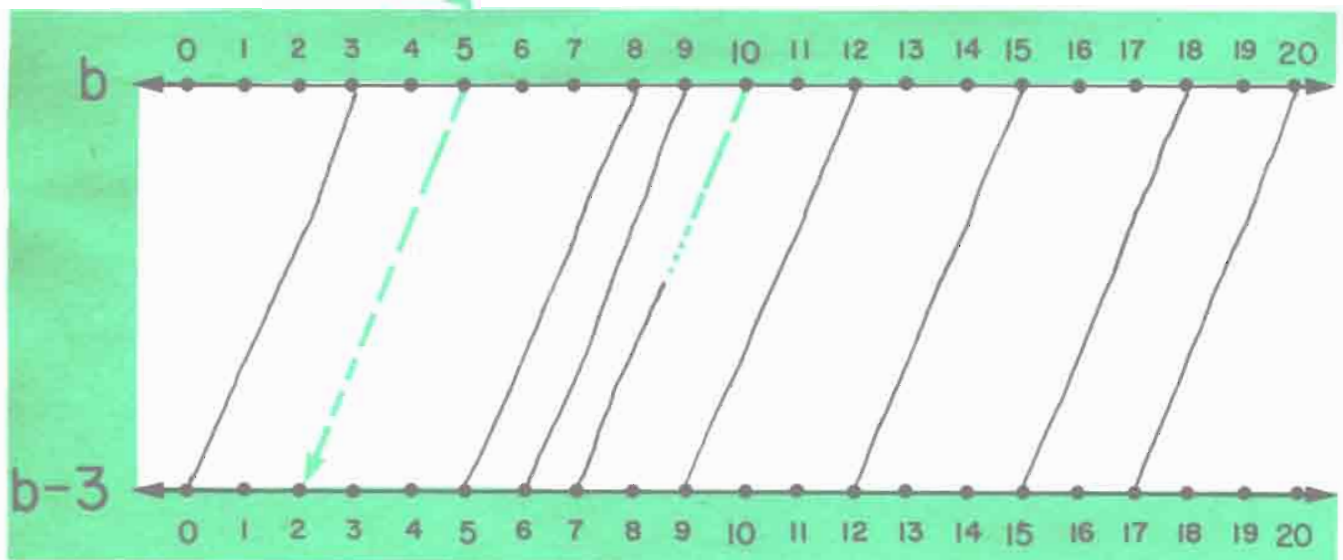
You can measure much more in your classroom!
¡ Pueden medir mucho más en su sala de clase!



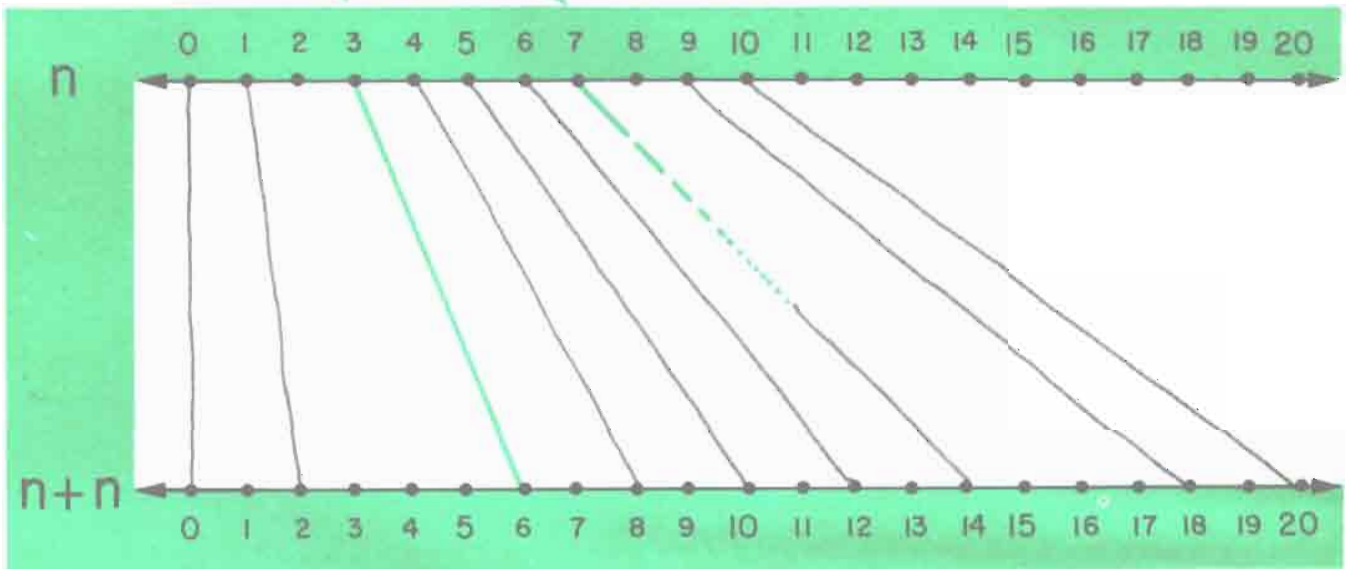
a	4	8	0	6	15	7	2	1	17
a+3	7	11	3	9	18	10	5	4	20



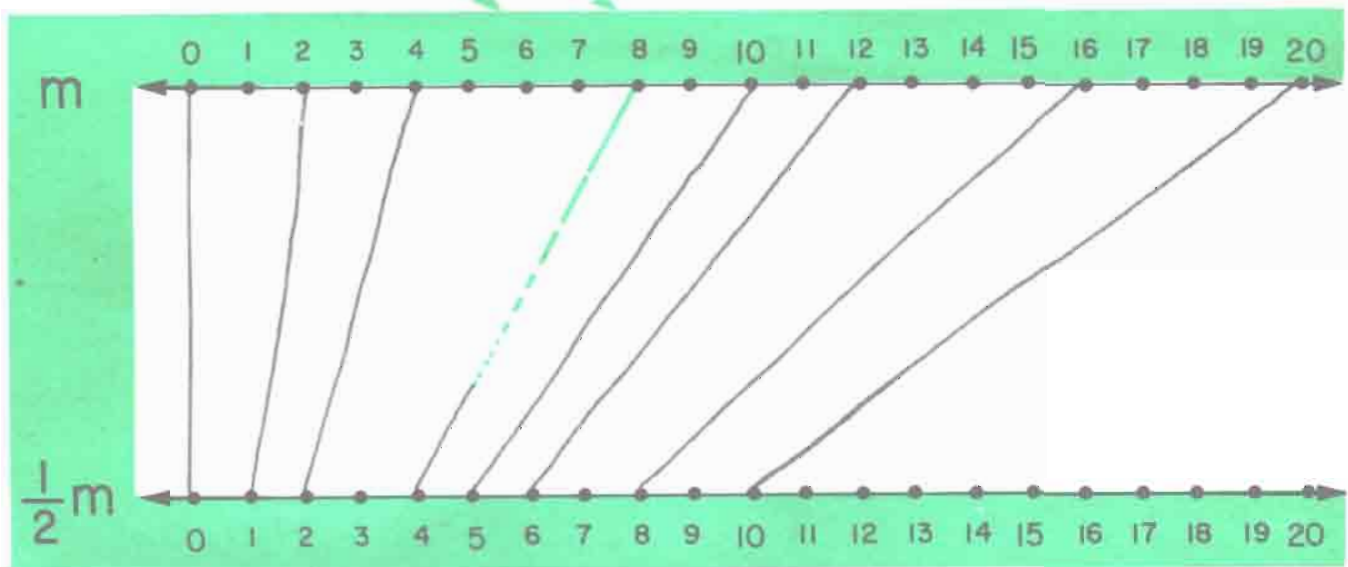
b	5	10	9	12	15	18	3	20	8
b-3	2	7	6	9	12	15	0	17	5



n	3	7	5	10	4	0	1	6	9
$n+n$	6	14	10	20	8	0	2	12	18



m	6	8	10	4	20	16	0	2	12
$\frac{1}{2}m$	3	4	5	2	10	8	0	1	6





Some stools have 3 legs.

Algunos banquillos tienen 3 patas.

x	1	2	4	8
3x	3	6	12	24

x	5	10
3x	15	30

x	3	6	9
3x	9	18	27

X in this case refers to the number of stools, 3x refers to the number of legs.

x	2	5	7
3x	6	15	21

x	3	6	12
3x	9	18	36

x	2	10	12
3x	6	30	36

x	0	1	2	3	4	5	6	7	8	9	10	11	12
3x	0	3	6	9	12	15	18	21	24	27	30	33	36

A wagon has 4 wheels.

Un carro tiene 4 ruedas.

a	4a
1	4
2	8
3	12

a	4a
2	8
3	12
5	20

a	4a
2	8
4	16
8	32
16	64

a	4a
3	12
6	24
9	36
15	60

a	4a
1	4
3	12
4	16

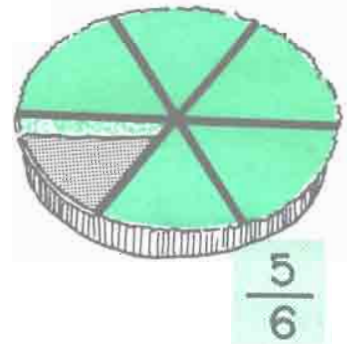
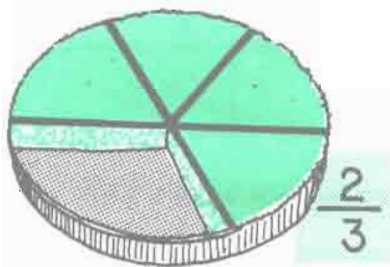
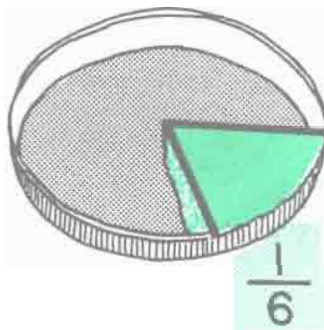
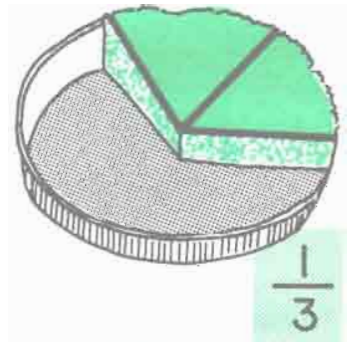
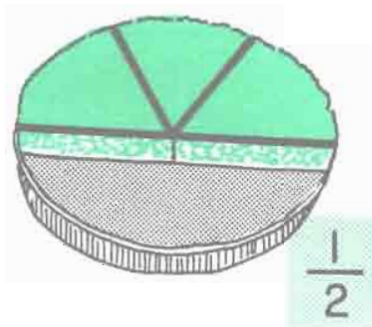
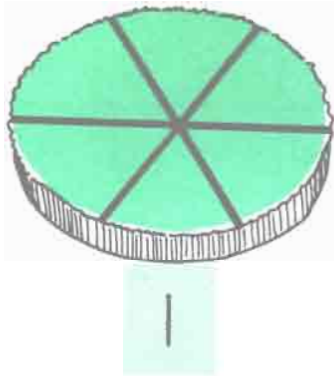
a	4a
5	20
2	8
7	28

a	4a
4	16
6	24
10	40
16	64

a	4a
5	20
10	40
15	60
25	100

What Do You See?

¿Qué Ve Usted?



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

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

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

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

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

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

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

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

$$\frac{1}{2} + \frac{1}{3} = \frac{5}{6}$$

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

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

$$\frac{5}{6} - \frac{1}{2} = \frac{1}{3}$$

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

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

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

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



One dime = two nickels

Un diez = dos cincos

10¢	1	2	4	8
5¢	2	4	8	16

10¢	5	10
5¢	10	20

10¢	3	5	8
5¢	6	10	16

10¢	4	5	9
5¢	8	10	18

10¢	1	6	7
5¢	2	12	14

10¢	7	2	9
5¢	14	4	18

10¢	0	1	2	3	4	5	6	11	8	9	10	16	12
5¢	0	2	4	6	8	10	12	22	16	18	20	32	24



One nickel = 5 pennies

Un cinco = 5 centavos

5¢	1¢
1	5
2	10
3	15

5¢	1¢
3	15
2	10
3	15

5¢	1¢
3	15
4	20
7	35
11	55

5¢	1¢
3	15
6	30
10	50
16	80

5¢	1¢
4	20
8	40
12	60

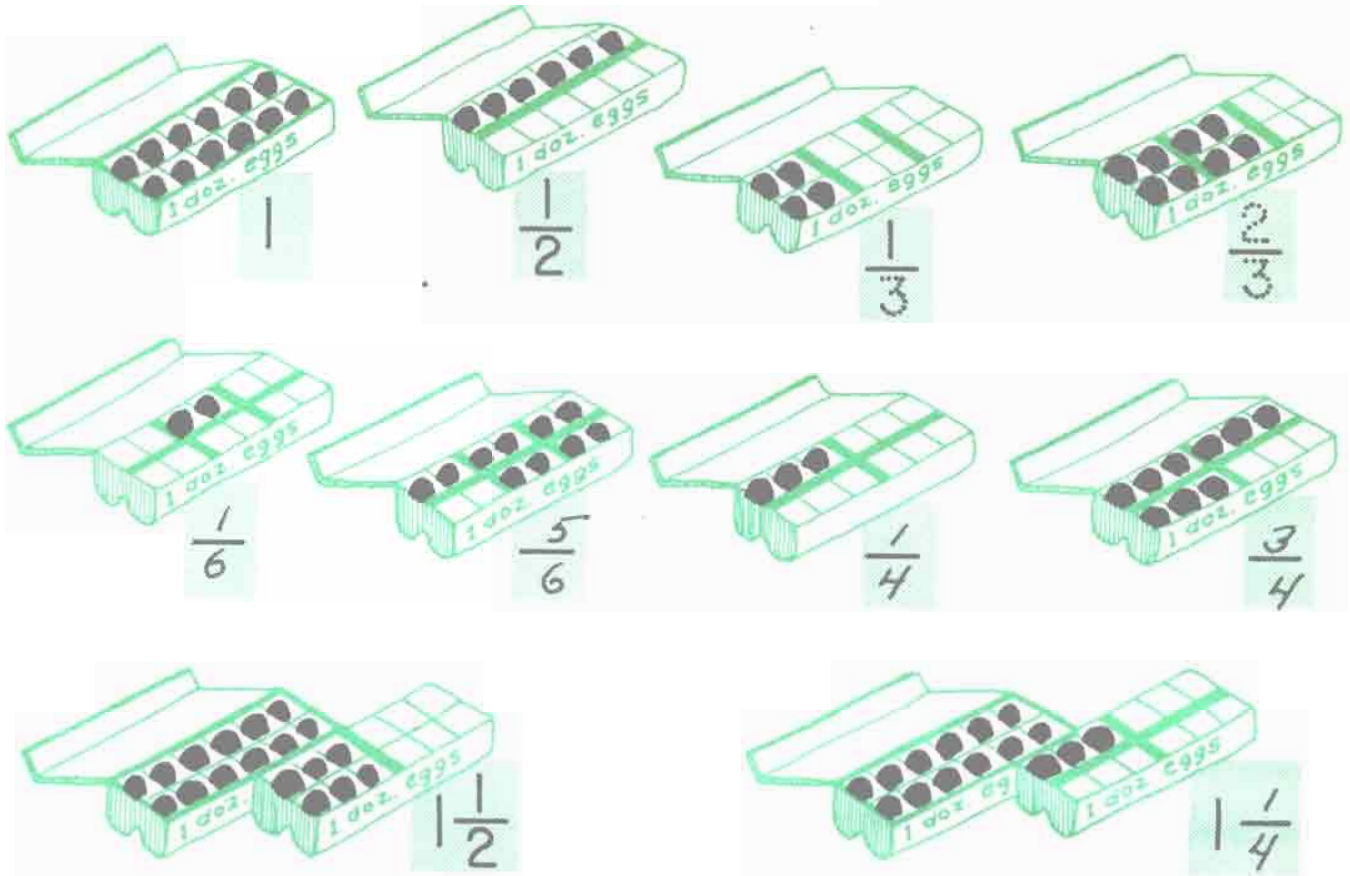
5¢	1¢
4	20
5	25
9	45

5¢	1¢
6	30
2	10
10	50
18	90

5¢	1¢
5	25
10	50
15	75
20	100

What Can You See?

¿Qué Puede Usted Ver?



See pages 94, 95 for more like this.

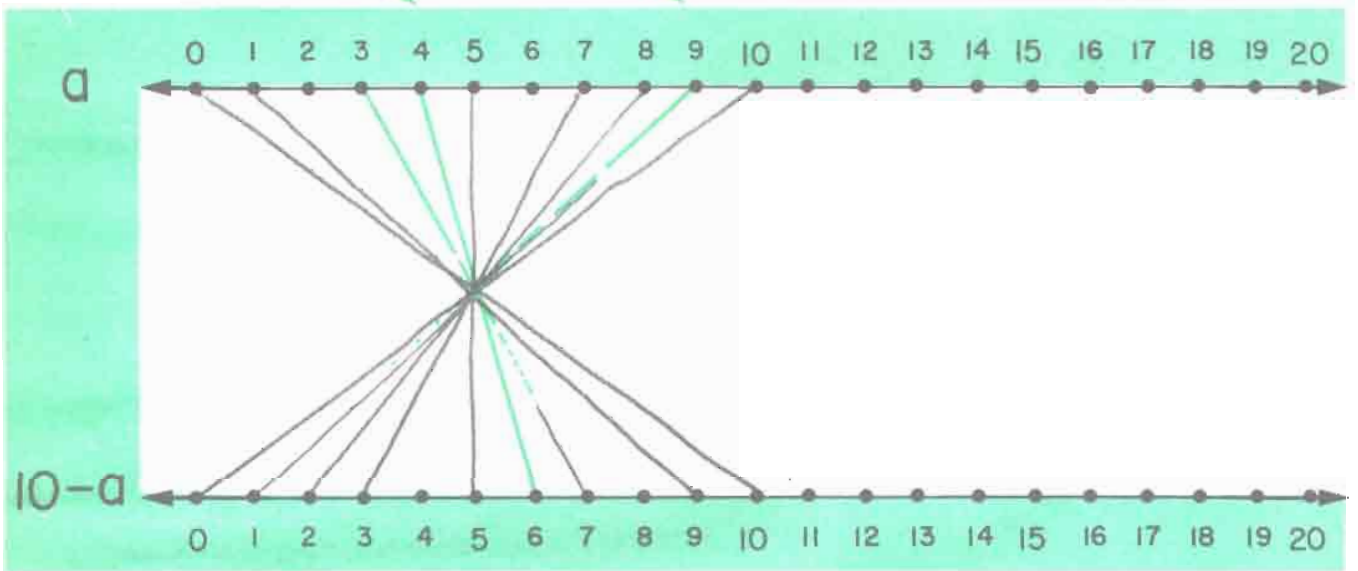
$$1 - \frac{1}{2} = \frac{1}{2} \quad 1 - \frac{1}{3} = \frac{2}{3} \quad 1 - \frac{1}{4} = \frac{3}{4} \quad 1 - \frac{1}{6} = \frac{5}{6}$$

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

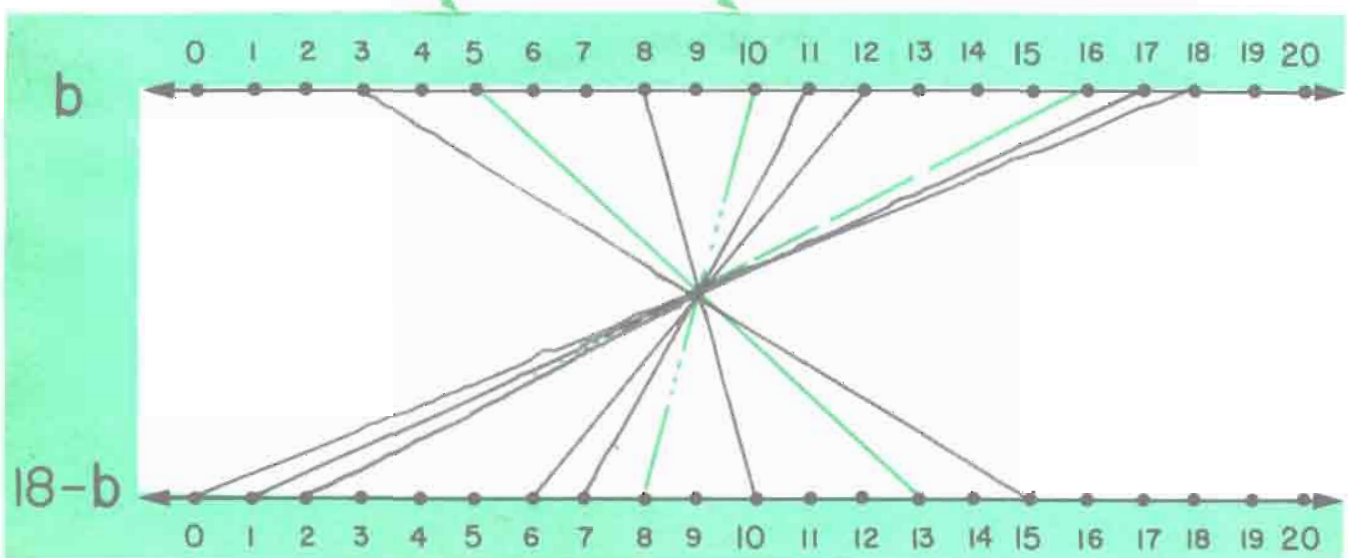
$$\frac{1}{6} + \frac{1}{6} = \frac{2}{6} = \frac{1}{3} \quad \frac{1}{4} + \frac{1}{4} = \frac{2}{4} = \frac{1}{2} \quad \frac{1}{2} + \frac{1}{2} + \frac{1}{2} = \frac{3}{2} = 1\frac{1}{2}$$

$$\frac{1}{4} + \frac{1}{2} = \frac{3}{4} \quad \frac{1}{6} + \frac{1}{3} = \frac{1}{2} \quad \frac{1}{2} + \frac{1}{3} = \frac{5}{6} \quad \frac{2}{3} + \frac{1}{6} = \frac{5}{6}$$

a	4	9	3	0	10	8	1	5	7
10-a	6	1	7	10	0	2	9	5	3



b	5	10	16	11	3	8	12	17	18
18-b	13	8	2	7	15	10	6	1	0

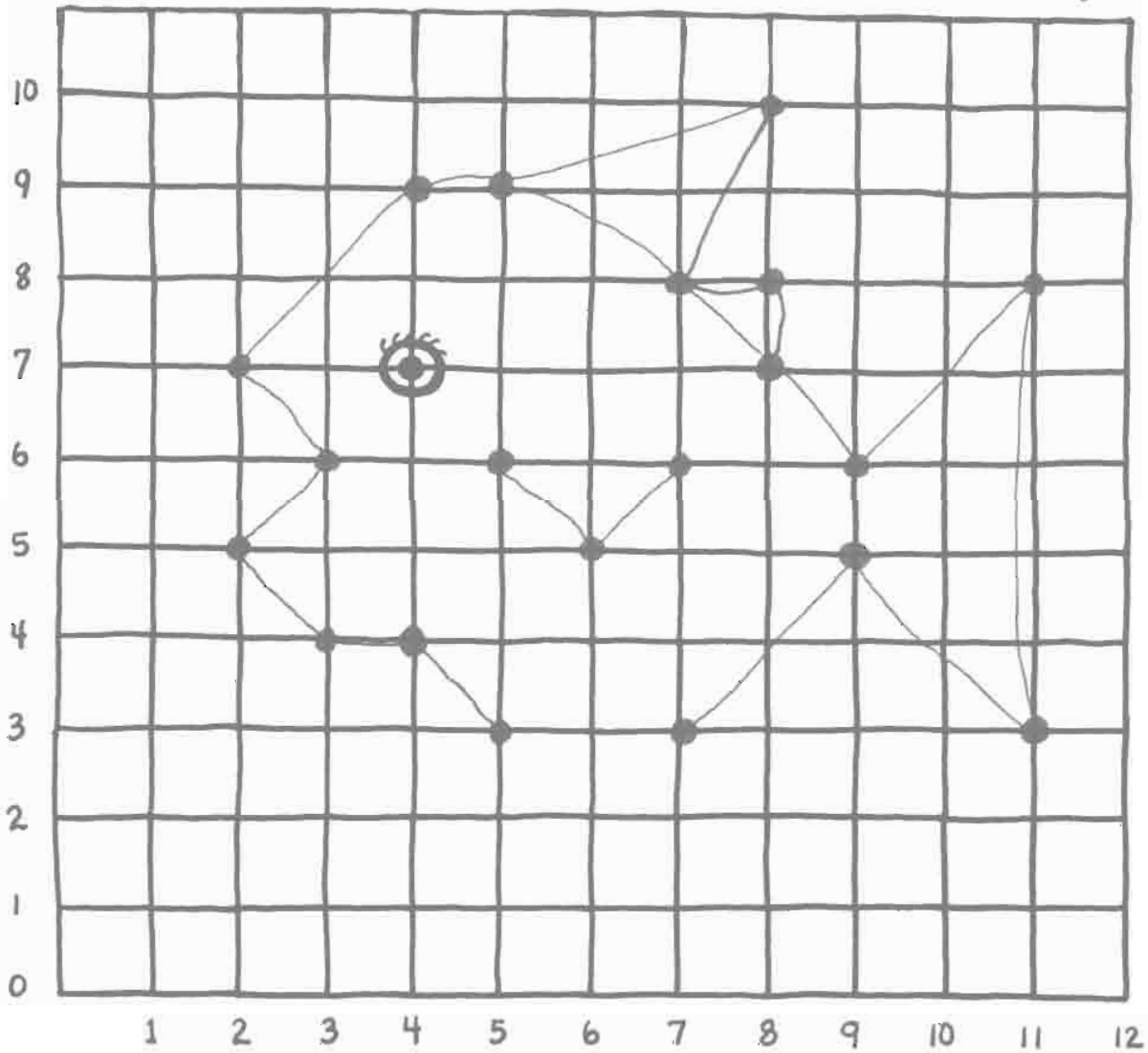


a la derecha
y
hacia arriba

MYSTERY GRAPH



over
and
up

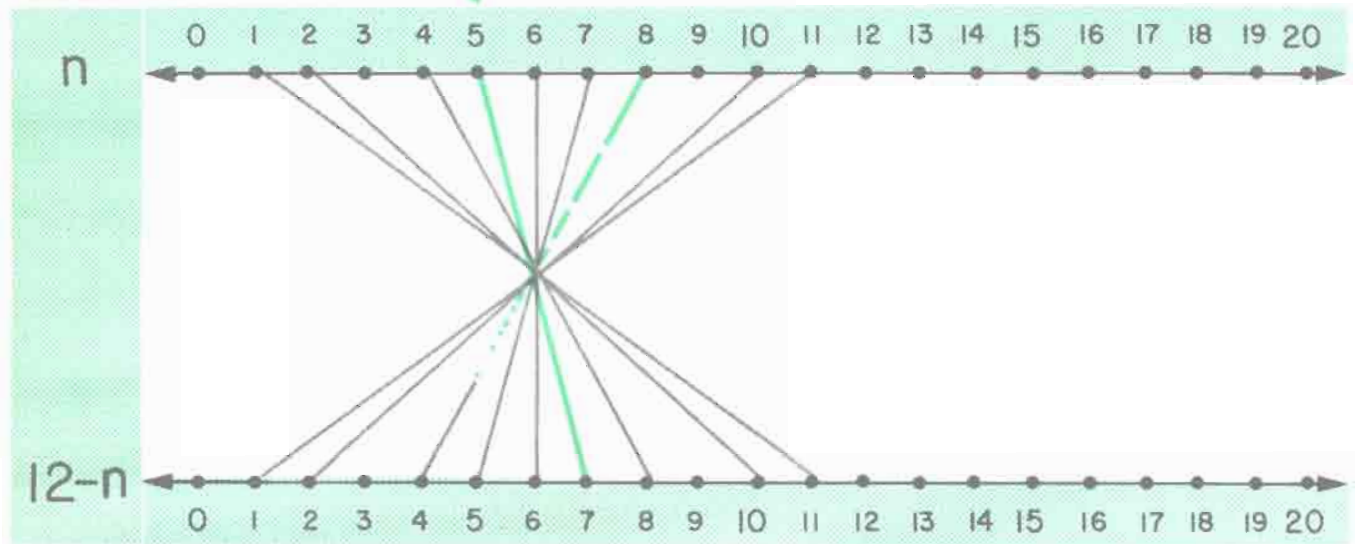


Encuentre estos puntos y conéctelos. • Find these points and connect them.

→	↑	→	↑	→	↑
2	5	8	10	9	5
3	6	7	8	7	3
2	7	9	6	5	3
4	9	11	8	4	4
5	9	11	3	3	4

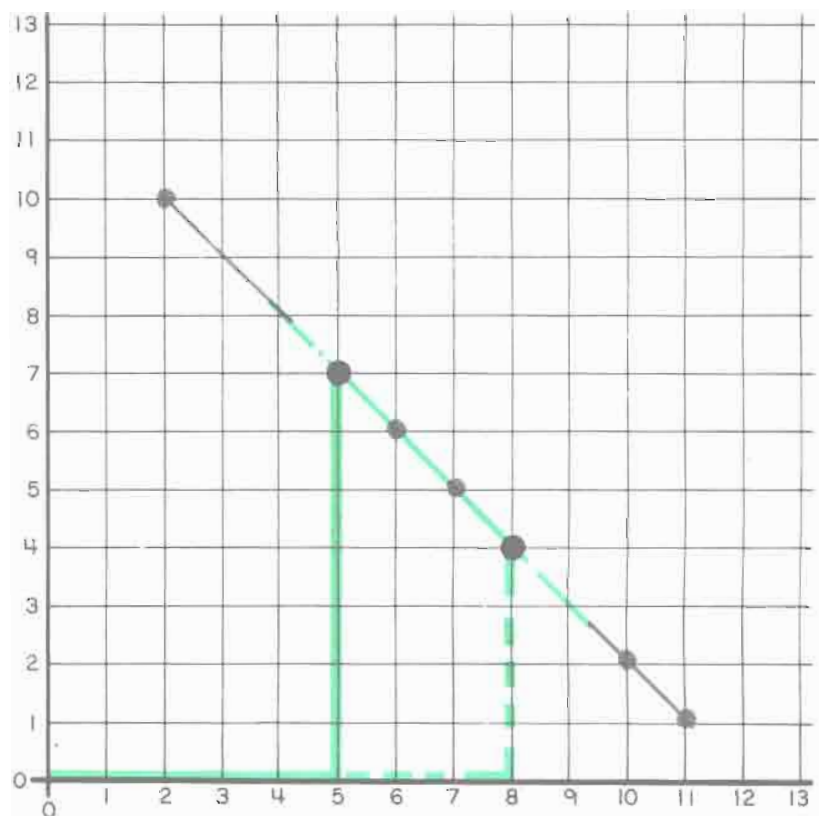
→	↑	→	↑	→	↑
8	8	8	7		
7	8	8	8	→	↑
5	9	7	8	8	7
5	6	6	5	7	6

n	5	8	10	2	7	6	4	1	11
12-n	7	4	2	10	5	6	8	11	1



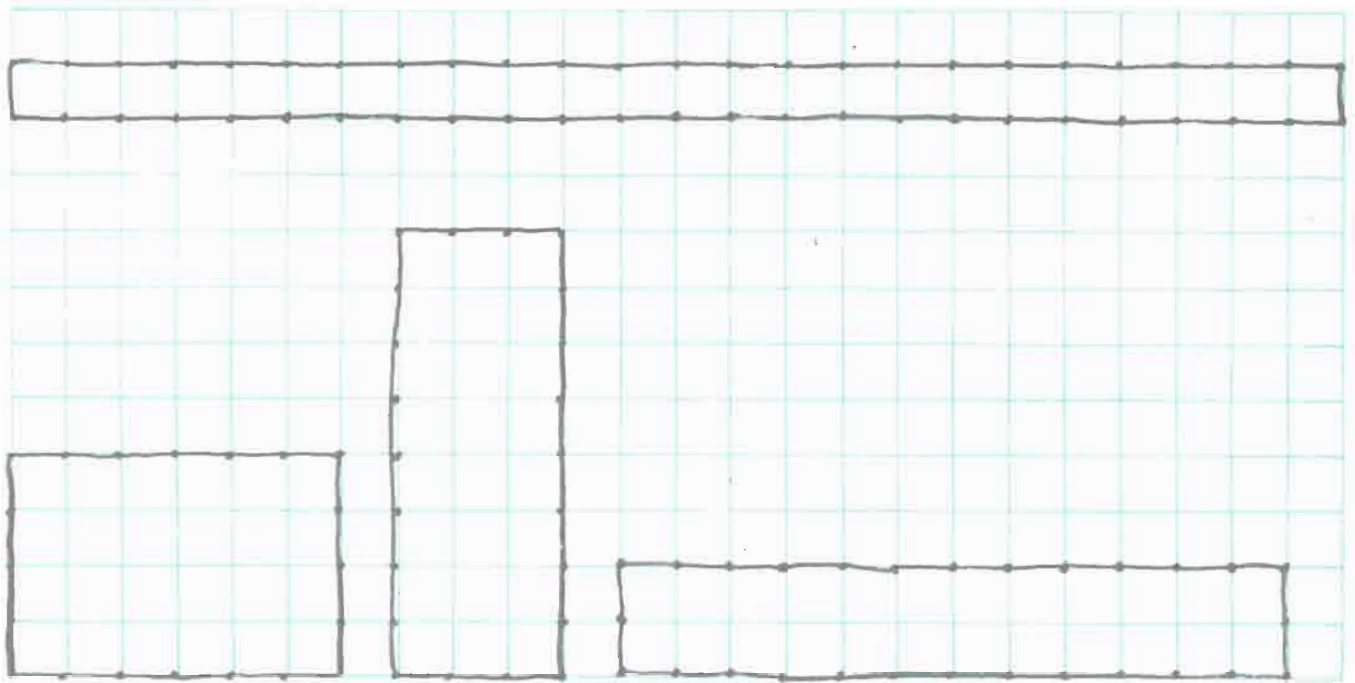
“a la derecha y hacia arriba”
“over and up”

→	n	12-n
	5	7
	8	4
	10	2
	2	10
	7	5
	6	6
	11	1



24

Please draw sketches in 4 different ways.
Favor de dibujar diagramas en 4 maneras diferentes.



20 24

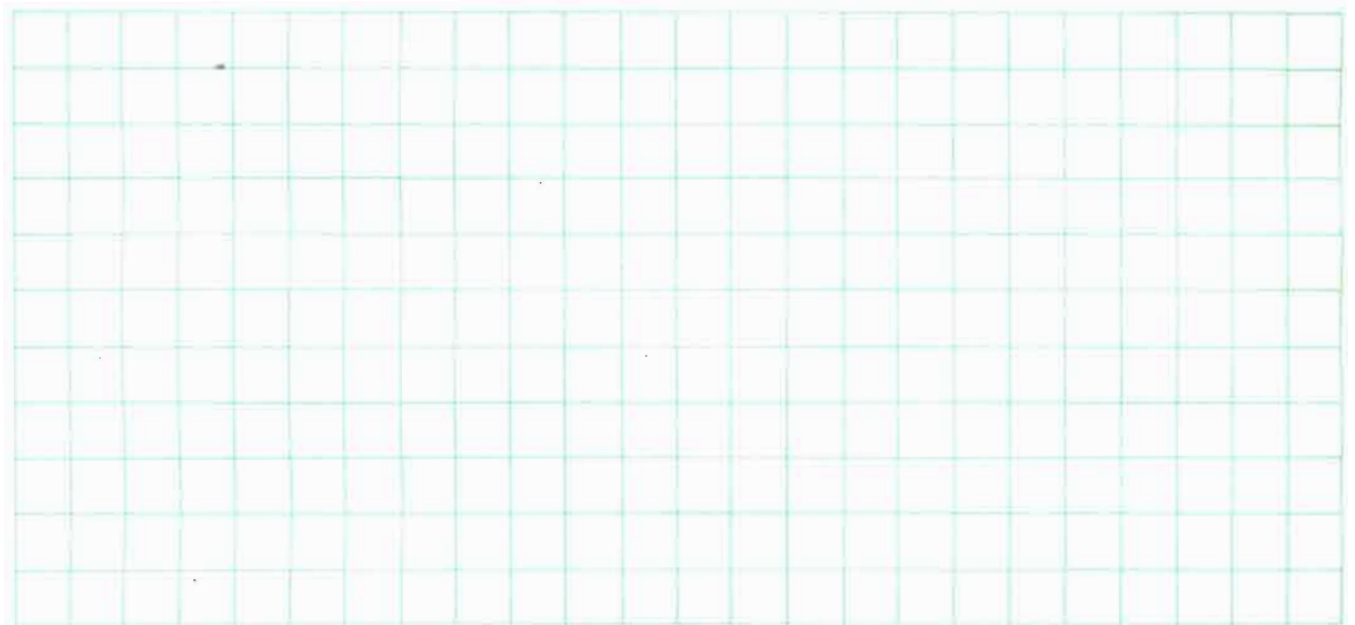
22 24

28 24

50 24

Please make up your own examples.

Favor de hacer sus propios ejemplos.



What Can You See?

¿Qué Puede Usied ver?



1



$\frac{1}{2}$



$\frac{1}{4}$



$\frac{1}{10}$



$\frac{3}{4}$



$\frac{1}{20}$



$\frac{1}{100}$



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



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



$\frac{10}{100} = \frac{1}{10}$



$\frac{2}{20} = \frac{1}{10}$



$\frac{5}{20} = \frac{1}{4}$



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

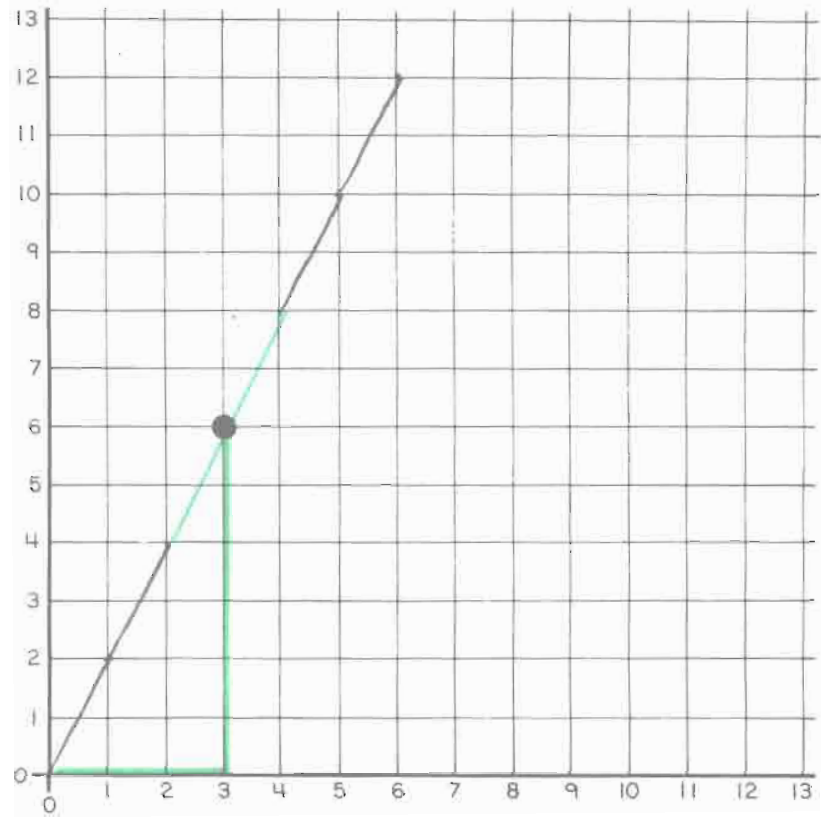


$\frac{1}{20} + \frac{2}{10} = \frac{1}{4}$

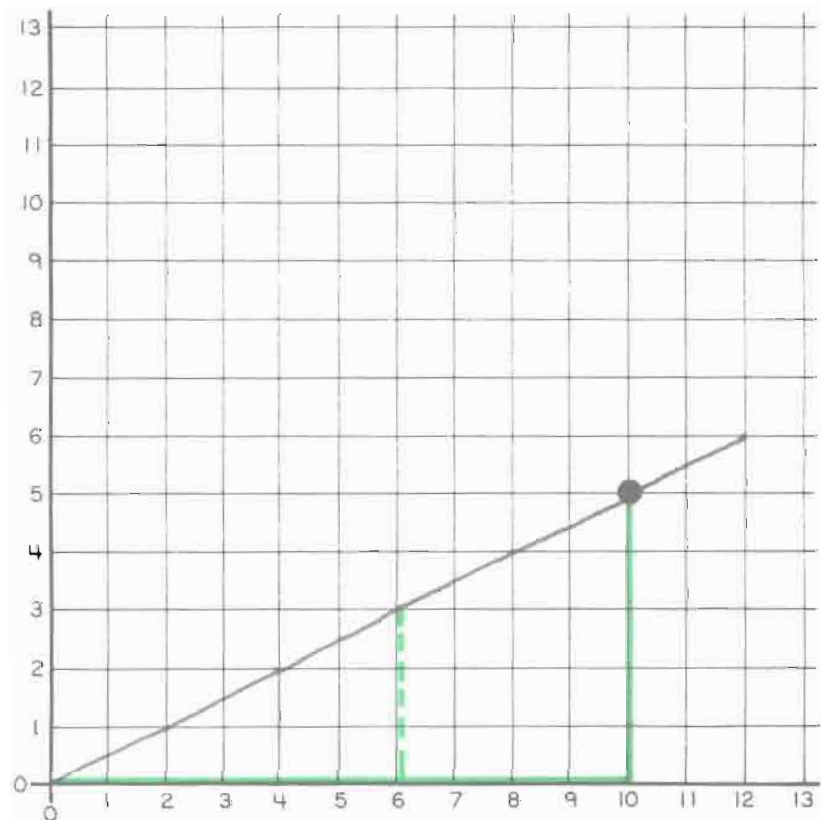
"over and up"

"a la derecha y hacia arriba"

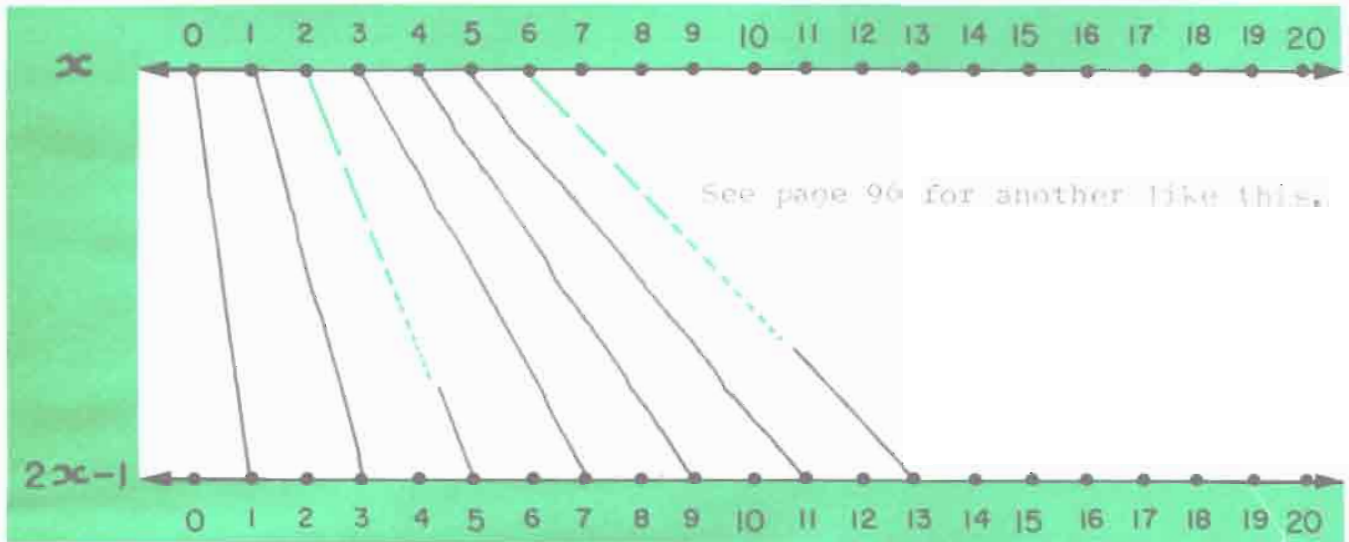
C	$C+C$
3	6
1	2
4	8
5	10
2	4
0	0
6	12



n	$\frac{1}{2}n$
10	5
6	3
4	2
2	1
8	4
0	0
12	6

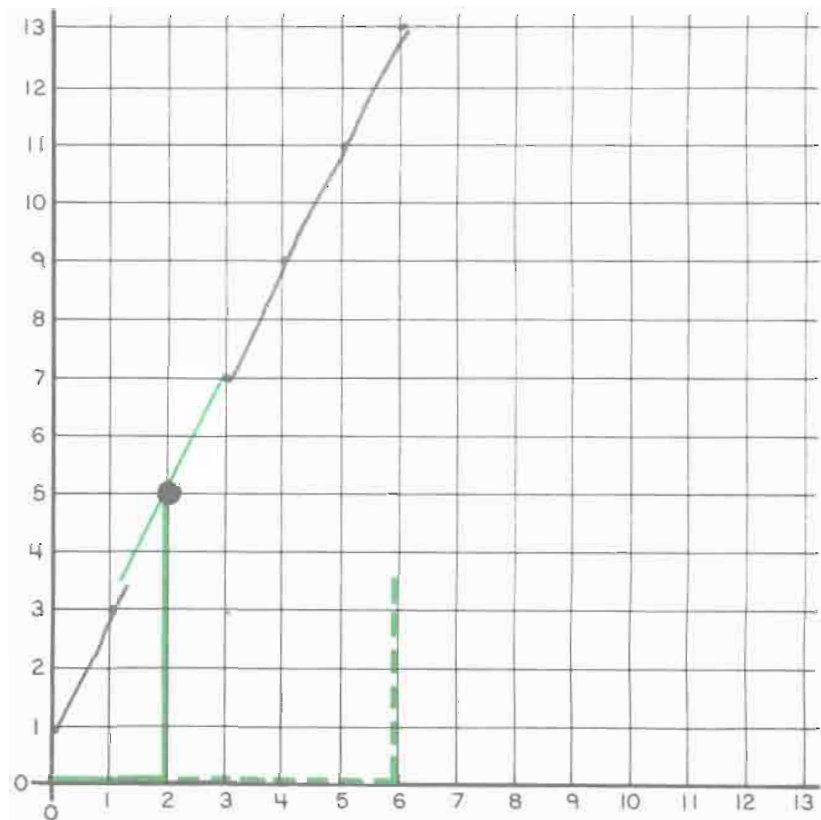


x	2	6	1	4	0	5	3			
$2x+1$	5	13	3	9	1	11	7			



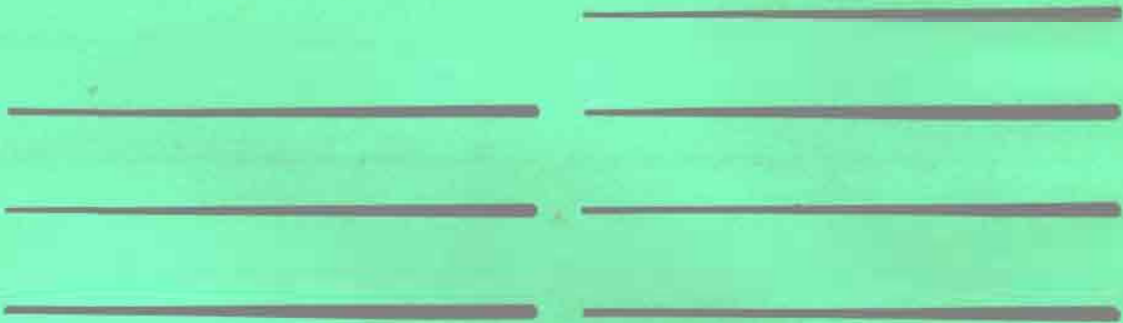
"over and up"
"a la derecha y hacia arriba"

x	$2x+1$
2	5
6	13
1	3
4	9
0	1
5	11
3	7



Stick Arithmetic

Aritmética de Palos



See also: DaE. pp. 117-137

Stick arithmetic example 1: The first column has 0 vertical sticks, and the second column has 4 vertical sticks. Below the lines is the equation $0 + 4 = 4$ written on a dashed line.

Stick arithmetic example 2: The first column has 6 vertical sticks, and the second column has 0 vertical sticks. Below the lines is the equation $6 + 0 = 6$ written on a dashed line.

Stick arithmetic example 3: The first column has 3 vertical sticks, and the second column has 4 vertical sticks. Below the lines is the equation $3 + 4 = 7$ written on a dashed line.

Stick arithmetic example 4: The first column has 0 vertical sticks, and the second column has 8 vertical sticks. Below the lines is the equation $0 + 8 = 8$ written on a dashed line.

Stick arithmetic example 5: The first column has 9 vertical sticks, and the second column has 0 vertical sticks. Below the lines is the equation $9 + 0 = 9$ written on a dashed line.

Stick arithmetic example 6: The first column has 6 vertical sticks, and the second column has 4 vertical sticks. Below the lines is the equation $6 + 4 = 10$ written on a dashed line.



$$4 + 3 = 7$$

or.. $2 + 6$

$$8 + 0 = 8$$

or.. $8 + 3$

$$2 + 9 = 11$$

or.. $6 + 6$
or.. $12 + 0$

$$0 + 12 = 12$$

$$4 + 9 = 13$$

or.. $14 + 0$.. or.. $8 + 6$

$$2 + 12 = 14$$

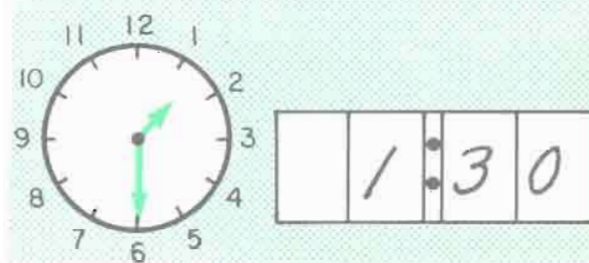
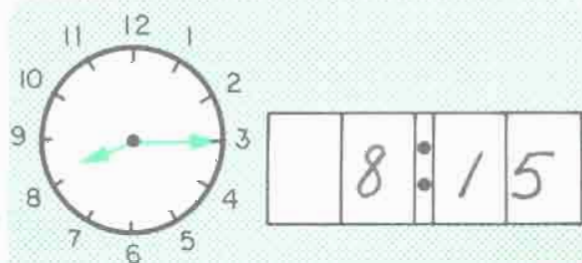
See also: D&P 117A-120B, 139A-139F

$\begin{array}{r} 9 \\ - 8 \\ \hline 1 \end{array}$	$\begin{array}{r} 14 \\ - 7 \\ \hline 7 \end{array}$	$\begin{array}{r} 3 \\ + 4 \\ \hline 7 \end{array}$	$\begin{array}{r} 9 \\ - 3 \\ \hline 6 \end{array}$	$\begin{array}{r} 10 \\ - 9 \\ \hline 1 \end{array}$	$\begin{array}{r} 9 \\ - 5 \\ \hline 4 \end{array}$	$\begin{array}{r} 11 \\ - 2 \\ \hline 9 \end{array}$	$\begin{array}{r} 11 \\ - 9 \\ \hline 2 \end{array}$
---	--	---	---	--	---	--	--

$\begin{array}{r} 7 \\ + 5 \\ \hline 12 \end{array}$	$\begin{array}{r} 15 \\ - 2 \\ \hline 13 \end{array}$	$\begin{array}{r} 5 \\ + 8 \\ \hline 13 \end{array}$	$\begin{array}{r} 3 \\ + 9 \\ \hline 12 \end{array}$	$\begin{array}{r} 9 \\ + 8 \\ \hline 17 \end{array}$	$\begin{array}{r} 8 \\ + 8 \\ \hline 16 \end{array}$	$\begin{array}{r} 6 \\ + 9 \\ \hline 15 \end{array}$	$\begin{array}{r} 7 \\ + 7 \\ \hline 14 \end{array}$
--	---	--	--	--	--	--	--

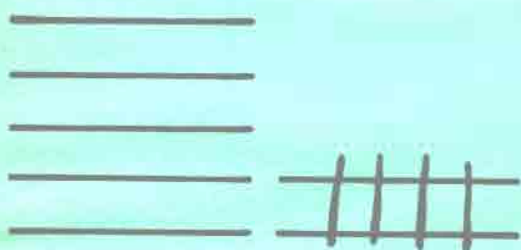
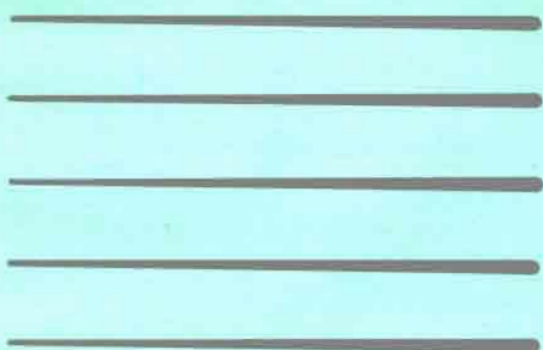
$\begin{array}{r} 6 \\ + 4 \\ \hline 10 \end{array}$	$\begin{array}{r} 7 \\ + 5 \\ \hline 12 \end{array}$	$\begin{array}{r} 8 \\ + 6 \\ \hline 14 \end{array}$	$\begin{array}{r} 9 \\ + 7 \\ \hline 16 \end{array}$	$\begin{array}{r} 6 \\ + 9 \\ \hline 15 \end{array}$	$\begin{array}{r} 7 \\ + 8 \\ \hline 15 \end{array}$	$\begin{array}{r} 8 \\ + 7 \\ \hline 15 \end{array}$	$\begin{array}{r} 9 \\ + 6 \\ \hline 15 \end{array}$
--	--	--	--	--	--	--	--

$\begin{array}{r} 6 \\ + 6 \\ \hline 12 \end{array}$	$\begin{array}{r} 7 \\ + 7 \\ \hline 14 \end{array}$	$\begin{array}{r} 8 \\ + 8 \\ \hline 16 \end{array}$	$\begin{array}{r} 9 \\ + 9 \\ \hline 18 \end{array}$	$\begin{array}{r} 9 \\ + 3 \\ \hline 12 \end{array}$	$\begin{array}{r} 8 \\ + 4 \\ \hline 12 \end{array}$	$\begin{array}{r} 7 \\ + 5 \\ \hline 12 \end{array}$	$\begin{array}{r} 6 \\ + 6 \\ \hline 12 \end{array}$
--	--	--	--	--	--	--	--

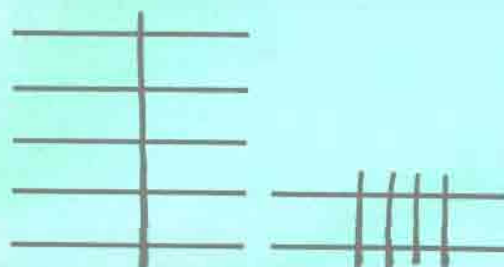


Stick Arithmetic

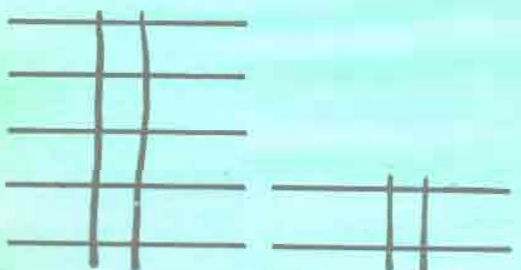
Aritmética en Palos



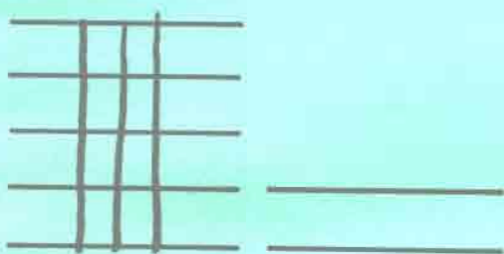
$$0 + 8 = 8$$



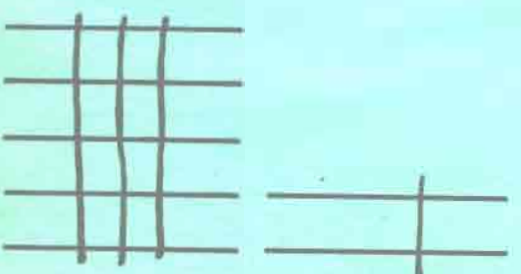
$$5 + 8 = 13$$



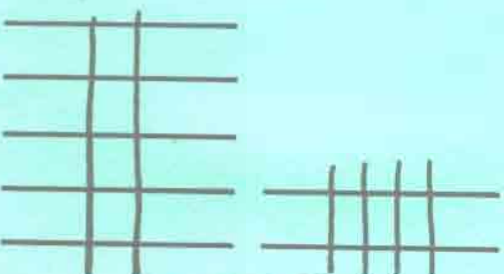
$$10 \text{ or } 0 + 4 = 14$$



$$15 + 0 = 15$$



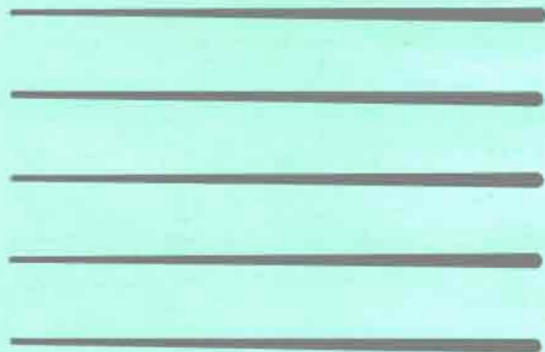
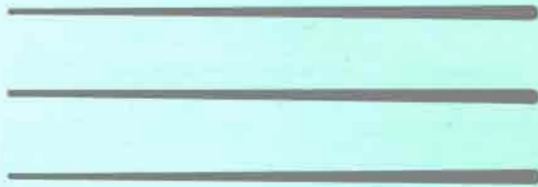
$$15 + 2 = 17$$



$$10 \text{ or } 0 + 8 = 18$$

Stick Arithmetic

Aritmética en Palos



$$9 + 0 = 9$$

or 15 + 0

$$0 + 15 = 15$$

$$6 + 10 = 16$$

$$12 + 5 = 17$$

or 18 + 0

$$3 + 15 = 18$$

$$9 + 10 = 19$$

or 18 + 10

M	E	A	S	I	G	O	R
$\frac{13}{-7}$	$\frac{12}{-4}$	$\frac{11}{-6}$	$\frac{9}{+7}$	$\frac{14}{-7}$	$\frac{5}{+9}$	$\frac{15}{-6}$	$\frac{4}{+9}$
$\frac{6}{}$	$\frac{8}{}$	$\frac{5}{}$	$\frac{16}{}$	$\frac{7}{}$	$\frac{14}{}$	$\frac{9}{}$	$\frac{13}{}$

$\frac{10}{}$	$\frac{S}{16}$	$\frac{E}{8}$	$\frac{R}{13}$	$\frac{4}{}$	$\frac{A}{5}$	$\frac{M}{6}$	$\frac{I}{7}$	$\frac{G}{14}$	$\frac{O}{9}$	$\frac{1}{}$	$\frac{2}{}$	$\frac{3}{}$	$\frac{12}{}$
---------------	----------------	---------------	----------------	--------------	---------------	---------------	---------------	----------------	---------------	--------------	--------------	--------------	---------------

R	S	E	D	O	U	M	N
$\frac{7}{+8}$	$\frac{12}{-10}$	$\frac{4}{+7}$	$\frac{9}{+9}$	$\frac{11}{-6}$	$\frac{16}{-8}$	$\frac{6}{+6}$	$\frac{15}{-9}$
$\frac{15}{}$	$\frac{2}{}$	$\frac{11}{}$	$\frac{18}{}$	$\frac{5}{}$	$\frac{8}{}$	$\frac{12}{}$	$\frac{6}{}$

$\frac{4}{}$	$\frac{16}{}$	$\frac{13}{}$	$\frac{O}{18}$	$\frac{E}{11}$	$\frac{14}{}$	$\frac{N}{6}$	$\frac{U}{8}$	$\frac{M}{12}$	$\frac{E}{11}$	$\frac{R}{15}$	$\frac{O}{5}$	$\frac{S}{2}$	$\frac{7}{}$
--------------	---------------	---------------	----------------	----------------	---------------	---------------	---------------	----------------	----------------	----------------	---------------	---------------	--------------

R	E	A	M	I	T	C	H
$\frac{8}{+6}$	$\frac{12}{-6}$	$\frac{9}{+8}$	$\frac{17}{-8}$	$\frac{13}{-5}$	$\frac{9}{+6}$	$\frac{15}{-8}$	$\frac{6}{+7}$
$\frac{14}{}$	$\frac{6}{}$	$\frac{17}{}$	$\frac{9}{}$	$\frac{8}{}$	$\frac{15}{}$	$\frac{7}{}$	$\frac{13}{}$

$\frac{10}{}$	$\frac{12}{}$	$\frac{11}{}$	$\frac{6}{}$	$\frac{A}{17}$	$\frac{R}{14}$	$\frac{I}{8}$	$\frac{T}{15}$	$\frac{H}{13}$	$\frac{M}{9}$	$\frac{E}{6}$	$\frac{T}{15}$	$\frac{I}{8}$	$\frac{C}{7}$
---------------	---------------	---------------	--------------	----------------	----------------	---------------	----------------	----------------	---------------	---------------	----------------	---------------	---------------

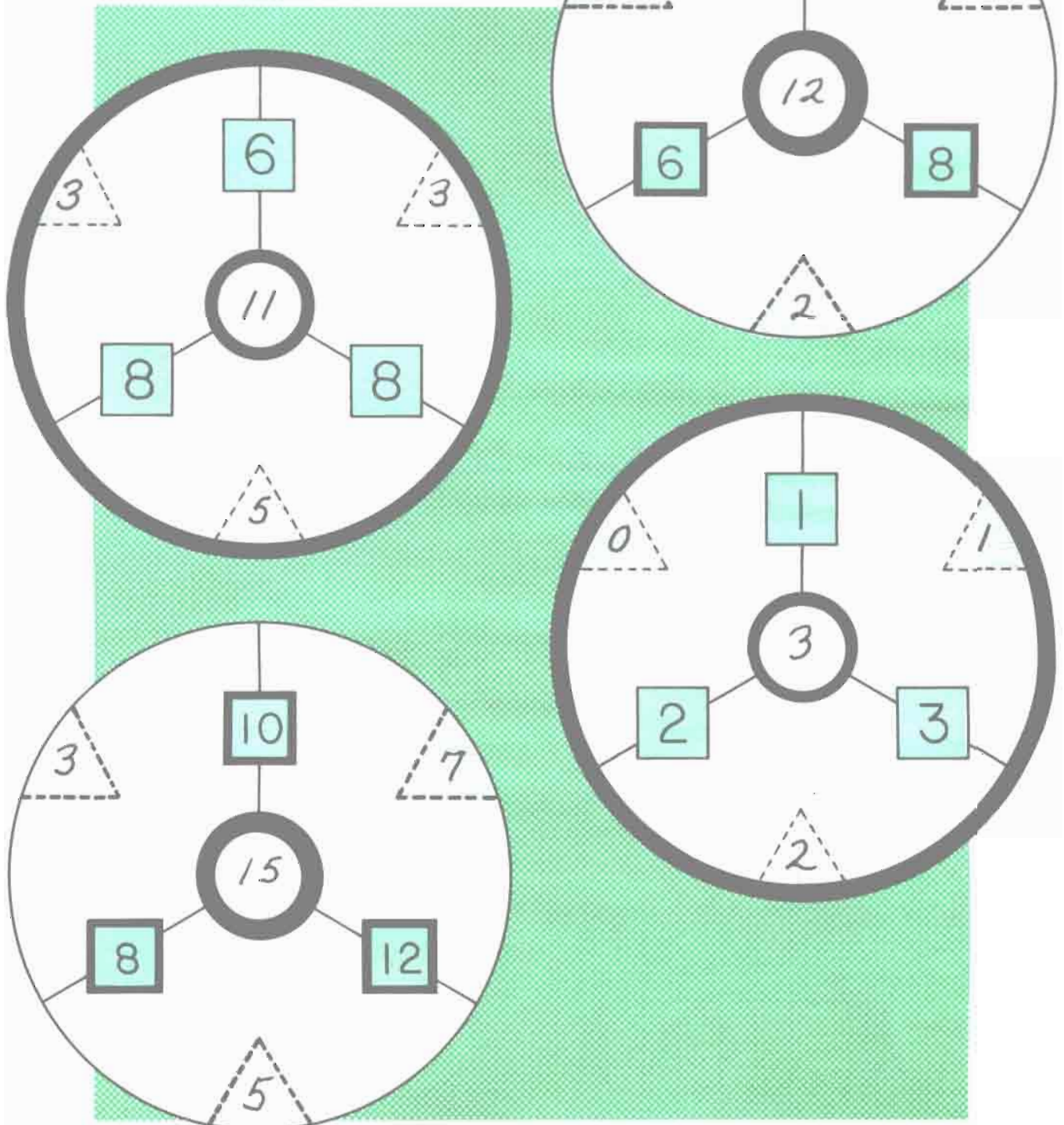
E	E	R	O	Y	M	T	G
$\frac{16}{-9}$	$\frac{11}{-3}$	$\frac{8}{+6}$	$\frac{12}{-6}$	$\frac{9}{+9}$	$\frac{15}{-6}$	$\frac{13}{-8}$	$\frac{8}{+8}$
$\frac{7}{}$	$\frac{8}{}$	$\frac{14}{}$	$\frac{6}{}$	$\frac{18}{}$	$\frac{9}{}$	$\frac{5}{}$	$\frac{16}{}$

$\frac{13}{}$	$\frac{G}{16}$	$\frac{E}{8}$	$\frac{O}{6}$	$\frac{M}{9}$	$\frac{E}{7}$	$\frac{T}{5}$	$\frac{R}{14}$	$\frac{Y}{18}$	$\frac{4}{}$	$\frac{11}{}$	$\frac{15}{}$	$\frac{10}{}$	$\frac{12}{}$
---------------	----------------	---------------	---------------	---------------	---------------	---------------	----------------	----------------	--------------	---------------	---------------	---------------	---------------

More "3-way Puzzles"
 (you may need counters)

Más "Rompecabezas de 3 Maneras"
 (tal vez necesite objetos para contar.)

See also: D&F pp. 61-75



$$\begin{array}{r} 13 \\ - 8 \\ \hline 5 \end{array} \quad \begin{array}{r} 3 \\ + 7 \\ \hline 10 \end{array} \quad \begin{array}{r} 9 \\ + 6 \\ \hline 15 \end{array} \quad \begin{array}{r} 10 \\ + 10 \\ \hline 20 \end{array}$$

$$\begin{array}{r} 13 \\ - 9 \\ \hline 4 \end{array} \quad \begin{array}{r} 14 \\ - 6 \\ \hline 8 \end{array} \quad \begin{array}{r} 3 \\ + 9 \\ \hline 12 \end{array} \quad \begin{array}{r} 9 \\ + 7 \\ \hline 16 \end{array}$$

$$\begin{array}{r} 14 \\ - 5 \\ \hline 9 \end{array} \quad \begin{array}{r} 6 \\ + 6 \\ \hline 12 \end{array} \quad \begin{array}{r} 7 \\ + 8 \\ \hline 15 \end{array} \quad \begin{array}{r} 9 \\ + 9 \\ \hline 18 \end{array}$$

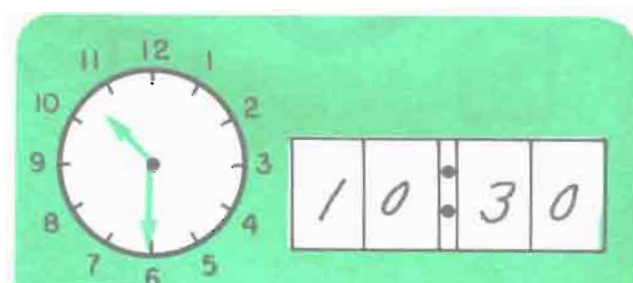
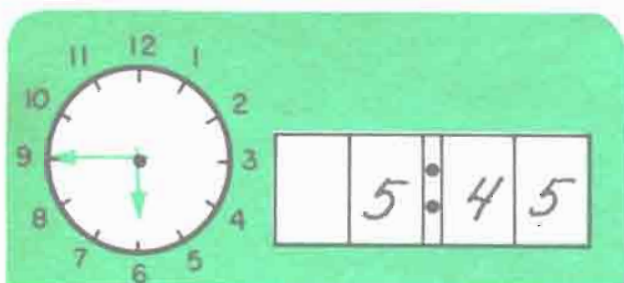
$$\begin{array}{r} 9 \\ + 5 \\ \hline 14 \end{array} \quad \begin{array}{r} 8 \\ + 4 \\ \hline 12 \end{array} \quad \begin{array}{r} 7 \\ + 3 \\ \hline 10 \end{array} \quad \begin{array}{r} 6 \\ + 2 \\ \hline 8 \end{array}$$

$$\begin{array}{r} 9 \\ + 8 \\ \hline 17 \end{array} \quad \begin{array}{r} 9 \\ + 7 \\ \hline 16 \end{array} \quad \begin{array}{r} 9 \\ + 6 \\ \hline 15 \end{array} \quad \begin{array}{r} 9 \\ + 5 \\ \hline 14 \end{array}$$

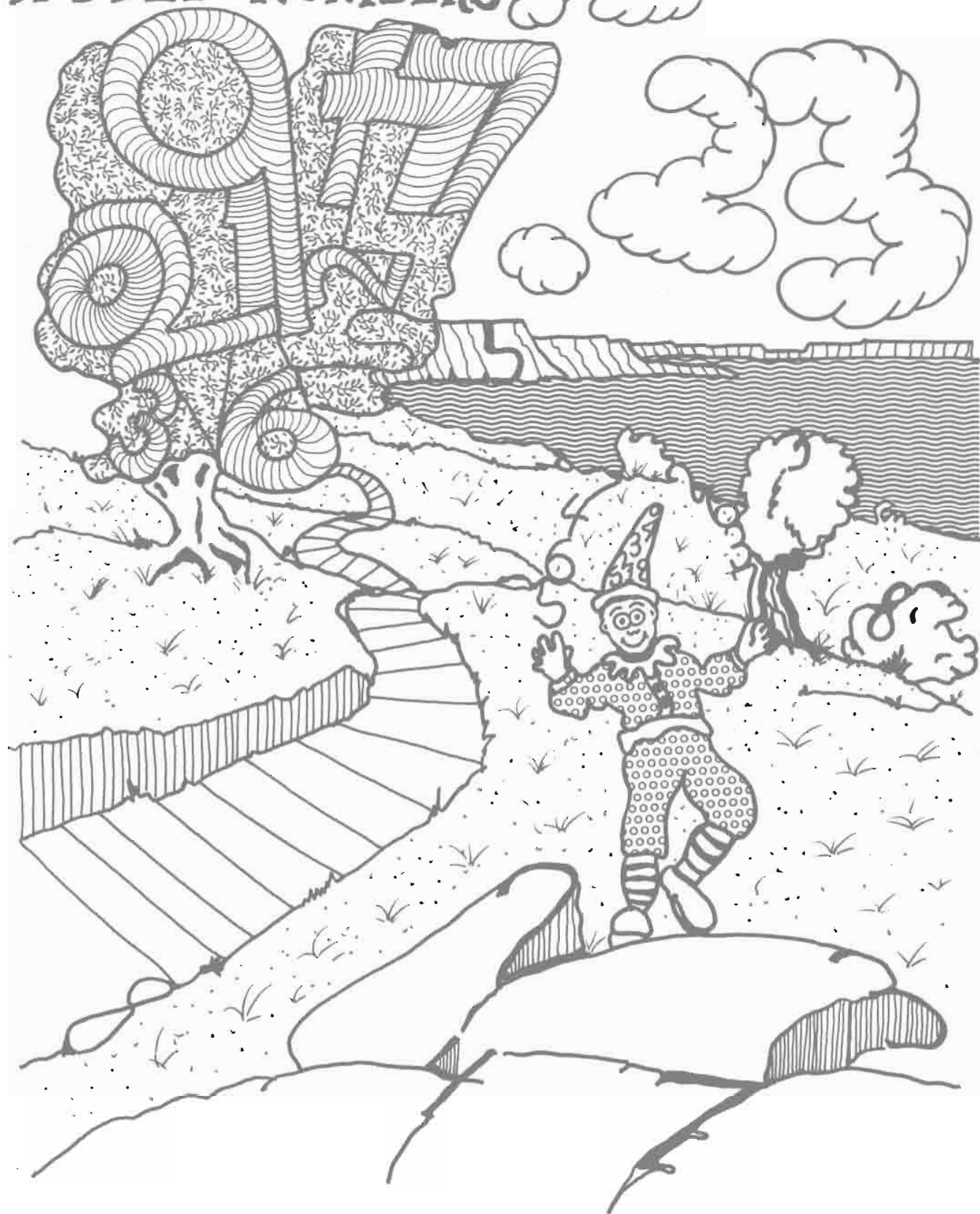
$$\begin{array}{r} 7 \\ + 7 \\ \hline 14 \end{array} \quad \begin{array}{r} 8 \\ + 6 \\ \hline 14 \end{array} \quad \begin{array}{r} 9 \\ + 5 \\ \hline 14 \end{array} \quad \begin{array}{r} 10 \\ + 4 \\ \hline 14 \end{array}$$

$$\begin{array}{r} 13 \\ - 6 \\ \hline 7 \end{array} \quad \begin{array}{r} 15 \\ - 7 \\ \hline 8 \end{array} \quad \begin{array}{r} 16 \\ - 8 \\ \hline 8 \end{array} \quad \begin{array}{r} 14 \\ - 7 \\ \hline 7 \end{array}$$

$$\begin{array}{r} 15 \\ - 9 \\ \hline 6 \end{array} \quad \begin{array}{r} 16 \\ - 9 \\ \hline 7 \end{array} \quad \begin{array}{r} 16 \\ - 8 \\ \hline 8 \end{array} \quad \begin{array}{r} 18 \\ - 9 \\ \hline 9 \end{array}$$



HIDDEN NUMBERS



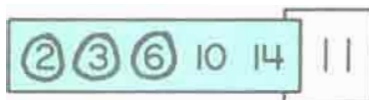
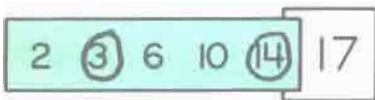
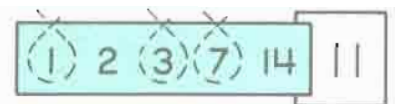
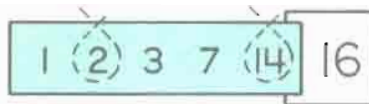
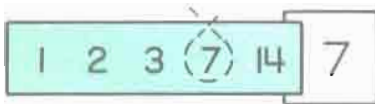
The children look for the hidden numbers and identify them however they choose. Encourage them to make up some of their own.

Loop Arithmetic

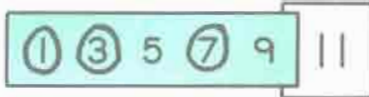
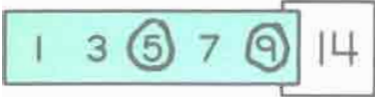
Aritmética en Lazo

Loop numbers in the list that add up to the number on the right.

Enlace los números en la lista que sumen el número a la derecha.

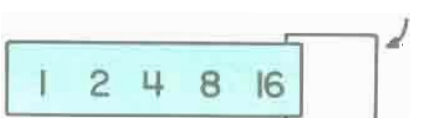
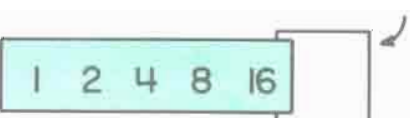
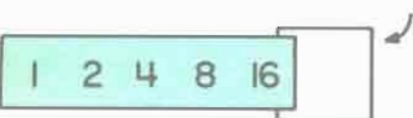
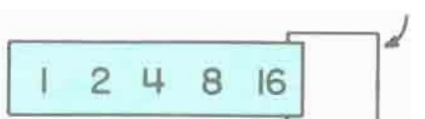
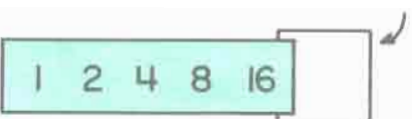
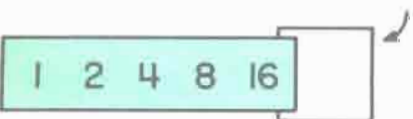
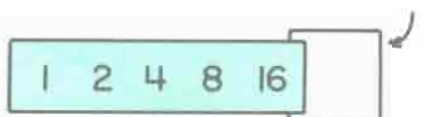
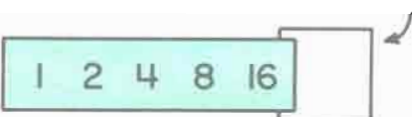
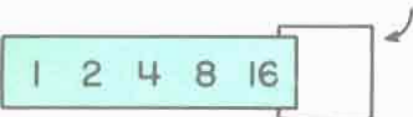
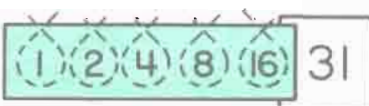
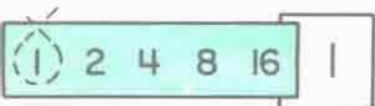


also 2 3 14



Please fill in the blanks on the right with different numbers from 1 to 31 then loop as above.

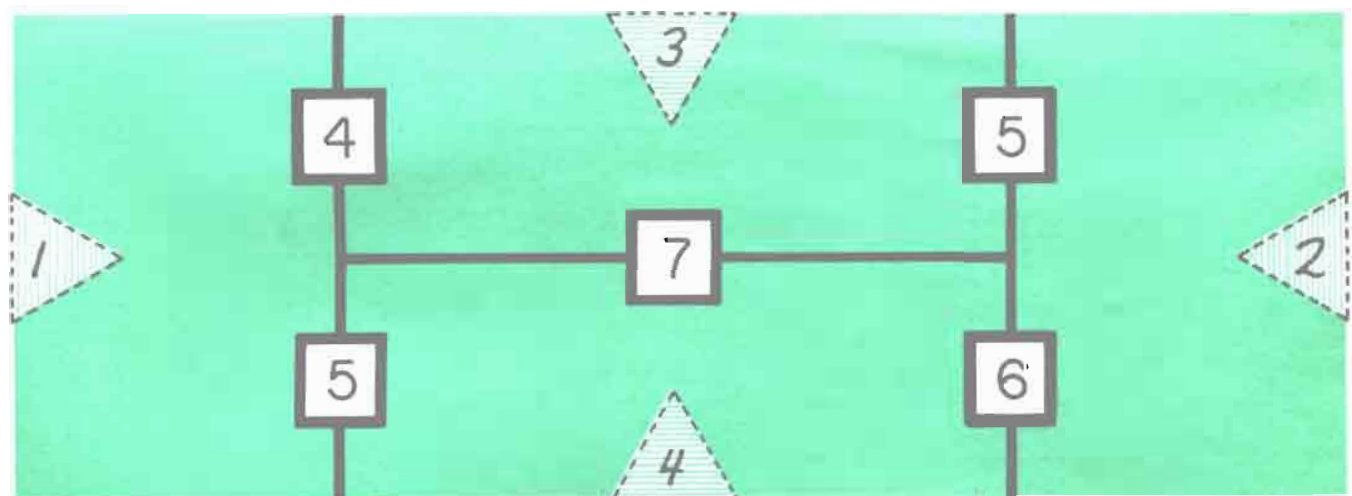
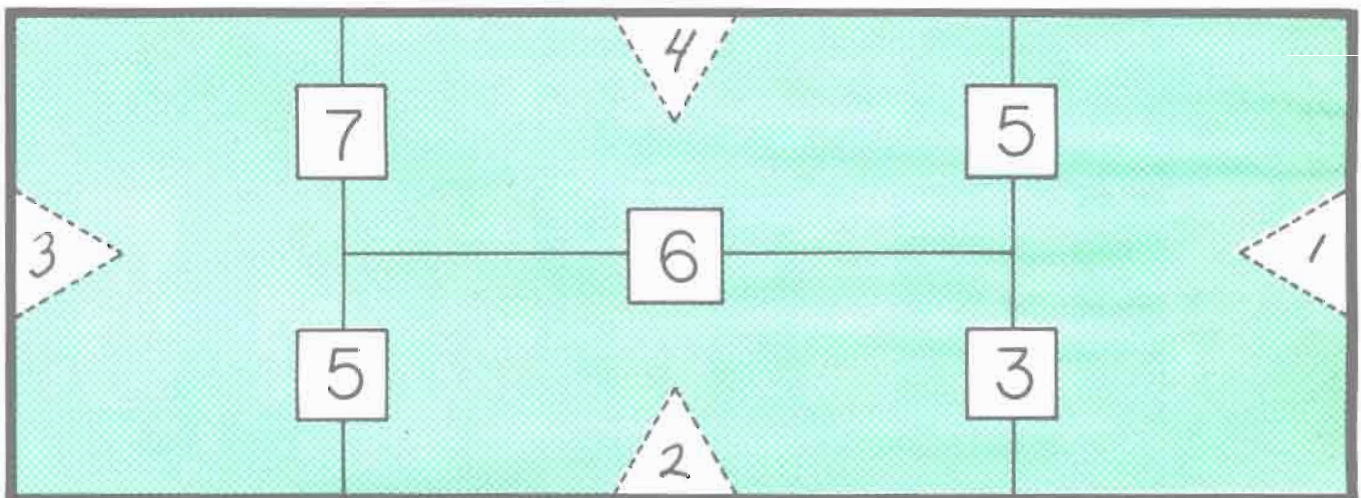
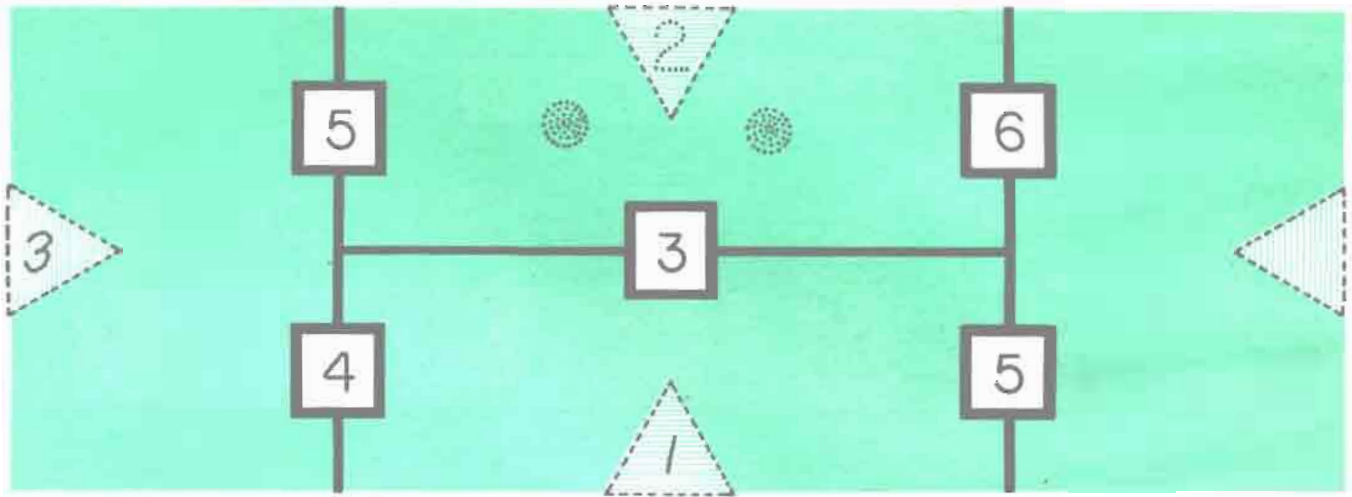
Favor de llenar los blancos a la derecha con números diferentes del 1 al 31 después enlácelos como arriba.



See also: D&P pp. 140-142

Más "Rompecabezas de 4 Maneras"
(tal vez necesite objetos para contar)

More "4-way Puzzles"
(you may need counters)



1, 2, 3, 5, 6, 7

$\begin{array}{r} 7 \\ \hline 2 \\ \hline + 1 \\ \hline 10 \end{array}$	$\begin{array}{r} 6 \\ \hline 3 \\ \hline + 1 \\ \hline 10 \end{array}$	$\begin{array}{r} 5 \\ \hline 2 \\ \hline + 3 \\ \hline 10 \end{array}$	$\begin{array}{r} 7 \\ \hline 5 \\ \hline + 2 \\ \hline 14 \end{array}$	$\begin{array}{r} 6 \\ \hline 5 \\ \hline + 3 \\ \hline 14 \end{array}$	$\begin{array}{r} 7 \\ \hline 6 \\ \hline + 1 \\ \hline 14 \end{array}$	$\begin{array}{r} 6 \\ \hline 5 \\ \hline + 1 \\ \hline 12 \end{array}$
---	---	---	---	---	---	---

2, 3, 4, 7, 8, 9

$\begin{array}{r} 9 \\ \hline 3 \\ \hline + 2 \\ \hline 14 \end{array}$	$\begin{array}{r} 8 \\ \hline 4 \\ \hline + 2 \\ \hline 14 \end{array}$	$\begin{array}{r} 7 \\ \hline 4 \\ \hline + 3 \\ \hline 14 \end{array}$	$\begin{array}{r} 9 \\ \hline 7 \\ \hline + 3 \\ \hline 19 \end{array}$	$\begin{array}{r} 9 \\ \hline 8 \\ \hline + 2 \\ \hline 19 \end{array}$	$\begin{array}{r} 8 \\ \hline 8 \\ \hline + 3 \\ \hline 19 \end{array}$	$\begin{array}{r} 8 \\ \hline 4 \\ \hline + 3 \\ \hline 15 \end{array}$
---	---	---	---	---	---	---

1, 3, 4, 5, 6, 8

$\begin{array}{r} 8 \\ \hline 3 \\ \hline + 1 \\ \hline 12 \end{array}$	$\begin{array}{r} 5 \\ \hline 4 \\ \hline + 3 \\ \hline 12 \end{array}$	$\begin{array}{r} 6 \\ \hline 5 \\ \hline + 1 \\ \hline 12 \end{array}$	$\begin{array}{r} 6 \\ \hline 5 \\ \hline + 4 \\ \hline 15 \end{array}$	$\begin{array}{r} 8 \\ \hline 6 \\ \hline + 1 \\ \hline 15 \end{array}$	$\begin{array}{r} 8 \\ \hline 3 \\ \hline + 4 \\ \hline 15 \end{array}$	$\begin{array}{r} 8 \\ \hline 4 \\ \hline + 1 \\ \hline 13 \end{array}$
---	---	---	---	---	---	---



SEA UN RELOJ DEL HIPOPÓTOMO BE A HIPPOWATCH

Cuente los segundos en 5 segundos diciendo:

Count the seconds in 5 seconds by saying:

Un hipopótomo	One hippopotamus
Dos hipopótomo	Two hippopotamus
Tres hipopótomo	three hippopotamus

¿Qué tan cerca estaba a los cinco segundos?
How close were you to five seconds?

Trate de marcar un minuto, contando a 60 hipopótomo.
Try to time one minute, counting to 60 hippopotamus.



INTENTO	TRY	INTENTO	TRY	INTENTO	TRY	INTENTO	TRY
# 1		# 2		# 3		# 4	

¿Puede usted encontrar otras palabras que duren un segundo?
Can you find other words that are one second long?



Materials needed: a watch or clock with a second hand.
The children will need partners to time them.

$\begin{array}{r} M \\ 7 \\ + 8 \\ \hline 15 \end{array}$	$\begin{array}{r} O \\ 13 \\ - 6 \\ \hline 7 \end{array}$	$\begin{array}{r} R \\ 4 \\ + 9 \\ \hline 13 \end{array}$	$\begin{array}{r} E \\ 12 \\ - 3 \\ \hline 9 \end{array}$	$\begin{array}{r} F \\ 13 \\ - 7 \\ \hline 6 \end{array}$	$\begin{array}{r} E \\ 9 \\ + 9 \\ \hline 18 \end{array}$	$\begin{array}{r} E \\ 14 \\ - 5 \\ \hline 9 \end{array}$	$\begin{array}{r} D \\ 16 \\ - 8 \\ \hline 8 \end{array}$
---	---	---	---	---	---	---	---

$\frac{14}{4}$	$\frac{10}{6}$	$\frac{13}{9}$	$\frac{18}{7}$	$\frac{8}{15}$	$\frac{11}{5}$	$\frac{12}{16}$
----------------	----------------	----------------	----------------	----------------	----------------	-----------------

$\begin{array}{r} I \\ 9 \\ + 9 \\ \hline 18 \end{array}$	$\begin{array}{r} E \\ 14 \\ - 7 \\ \hline 7 \end{array}$	$\begin{array}{r} T \\ 7 \\ + 8 \\ \hline 15 \end{array}$	$\begin{array}{r} R \\ 5 \\ + 8 \\ \hline 13 \end{array}$	$\begin{array}{r} A \\ 15 \\ - 9 \\ \hline 6 \end{array}$	$\begin{array}{r} B \\ 8 \\ + 9 \\ \hline 17 \end{array}$	$\begin{array}{r} D \\ 12 \\ - 4 \\ \hline 8 \end{array}$	$\begin{array}{r} L \\ 16 \\ - 7 \\ \hline 9 \end{array}$
---	---	---	---	---	---	---	---

$\frac{12}{5}$	$\frac{10}{16}$	$\frac{9}{18}$	$\frac{17}{13}$	$\frac{7}{6}$	$\frac{15}{8}$	$\frac{11}{14}$
----------------	-----------------	----------------	-----------------	---------------	----------------	-----------------

$\begin{array}{r} L \\ 12 \\ - 9 \\ \hline 3 \end{array}$	$\begin{array}{r} E \\ 17 \\ - 8 \\ \hline 9 \end{array}$	$\begin{array}{r} A \\ 4 \\ + 9 \\ \hline 13 \end{array}$	$\begin{array}{r} S \\ 7 \\ + 5 \\ \hline 12 \end{array}$	$\begin{array}{r} L \\ 15 \\ - 9 \\ \hline 6 \end{array}$	$\begin{array}{r} A \\ 7 \\ + 8 \\ \hline 15 \end{array}$	$\begin{array}{r} B \\ 9 \\ + 7 \\ \hline 16 \end{array}$	$\begin{array}{r} B \\ 14 \\ - 6 \\ \hline 8 \end{array}$
---	---	---	---	---	---	---	---

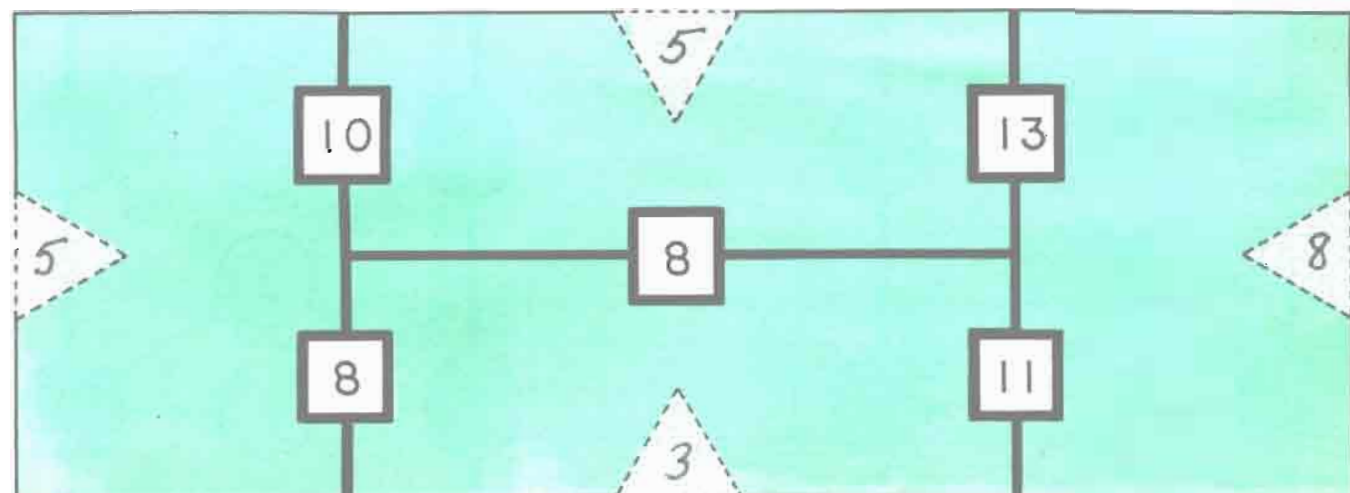
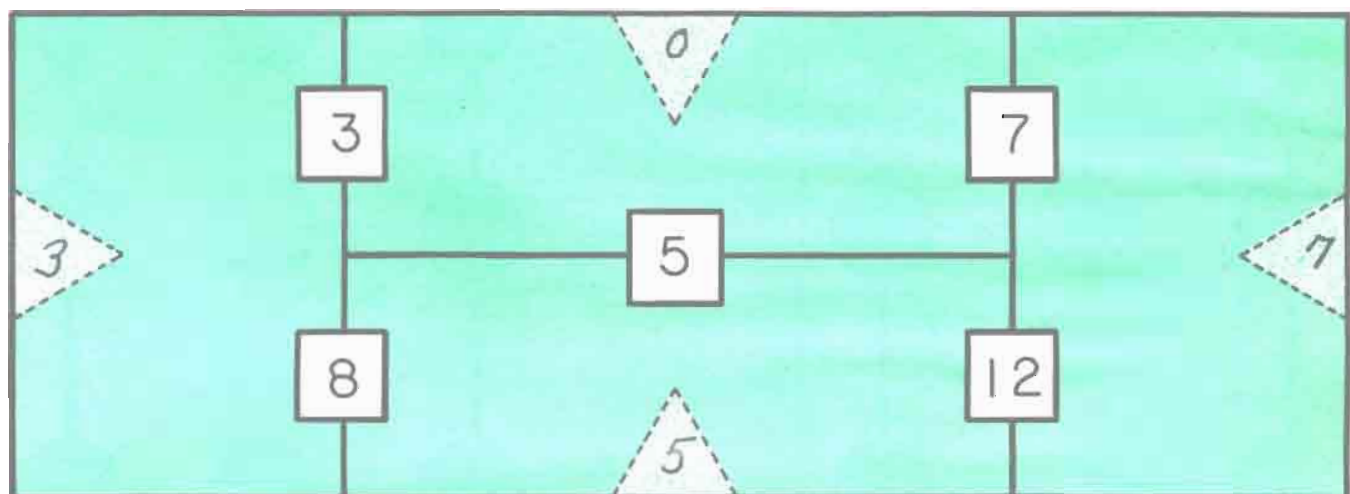
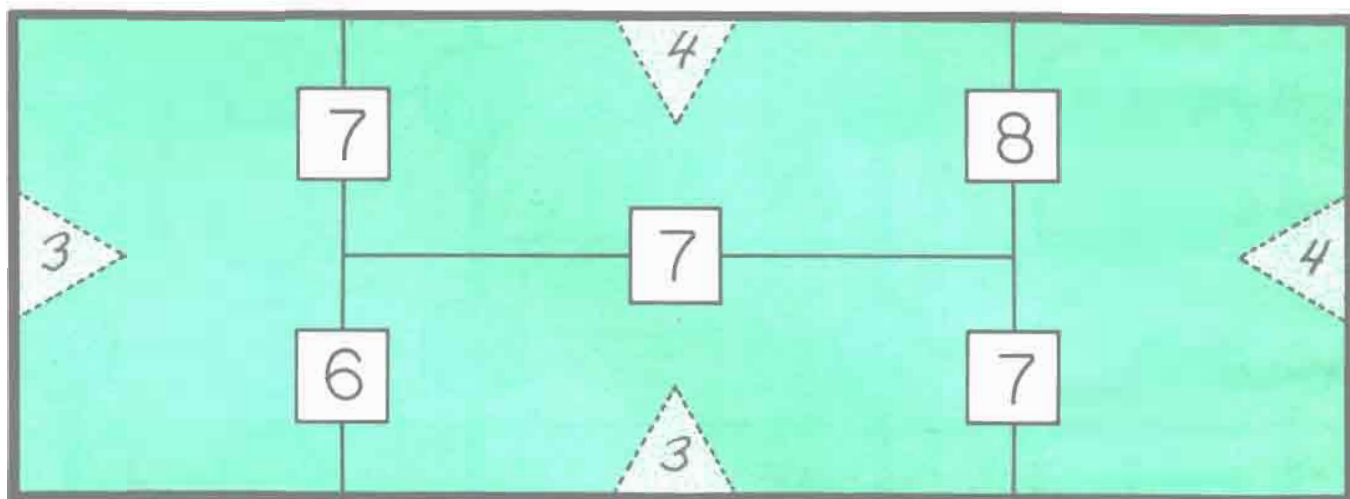
$\frac{14}{11}$	$\frac{8}{13}$	$\frac{12}{9}$	$\frac{7}{16}$	$\frac{15}{3}$	$\frac{6}{5}$	$\frac{10}{17}$
-----------------	----------------	----------------	----------------	----------------	---------------	-----------------

$\begin{array}{r} B \\ 14 \\ - 9 \\ \hline 5 \end{array}$	$\begin{array}{r} O \\ 7 \\ + 9 \\ \hline 16 \end{array}$	$\begin{array}{r} I \\ 18 \\ - 9 \\ \hline 9 \end{array}$	$\begin{array}{r} S \\ 7 \\ + 8 \\ \hline 15 \end{array}$	$\begin{array}{r} E \\ 7 \\ + 7 \\ \hline 14 \end{array}$	$\begin{array}{r} L \\ 14 \\ - 8 \\ \hline 6 \end{array}$	$\begin{array}{r} T \\ 13 \\ - 4 \\ \hline 9 \end{array}$	$\begin{array}{r} B \\ 16 \\ - 9 \\ \hline 7 \end{array}$
---	---	---	---	---	---	---	---

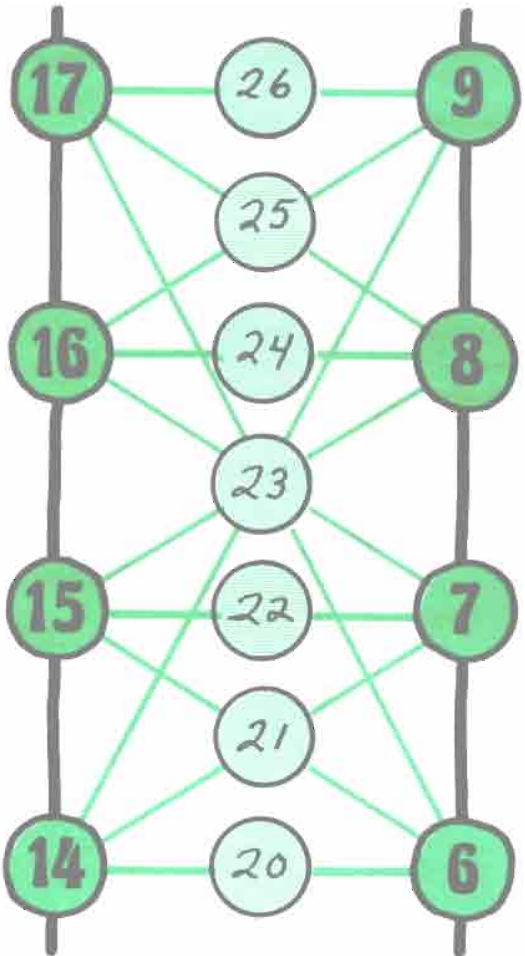
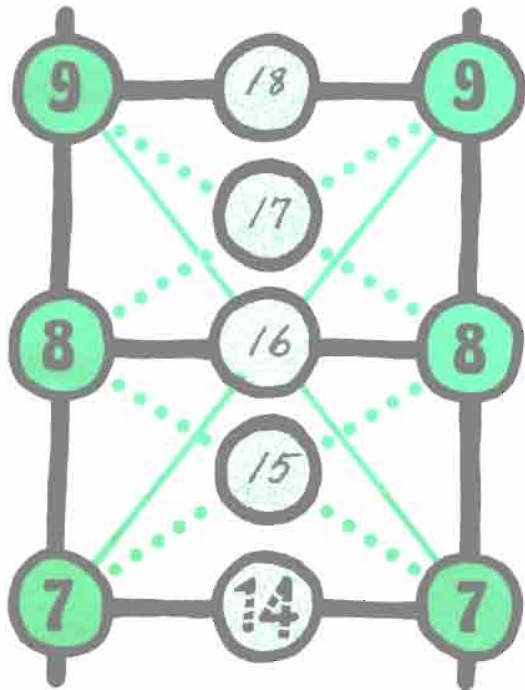
$\frac{11}{13}$	$\frac{8}{7}$	$\frac{14}{9}$	$\frac{15}{5}$	$\frac{16}{6}$	$\frac{4}{10}$	$\frac{17}{12}$
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More "4-way Puzzles"
(you may need counters)

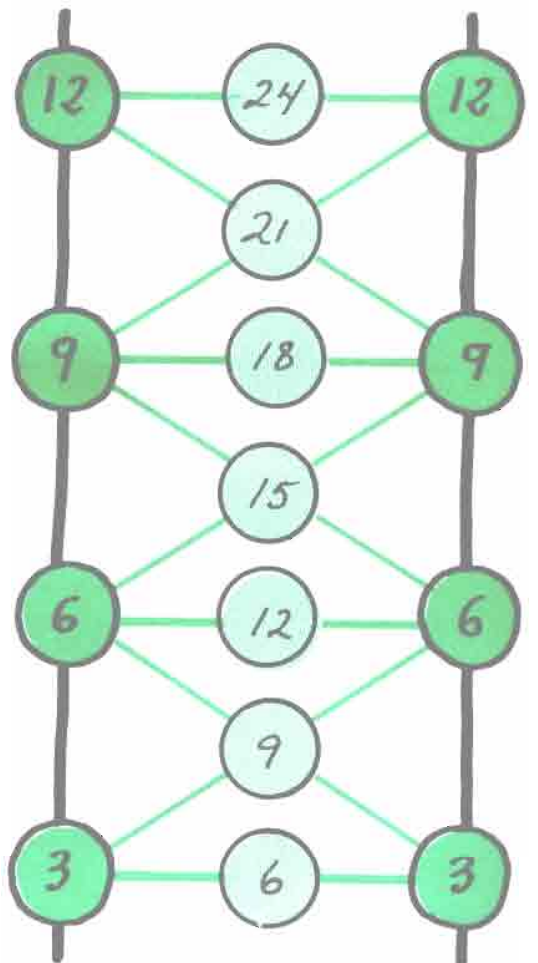
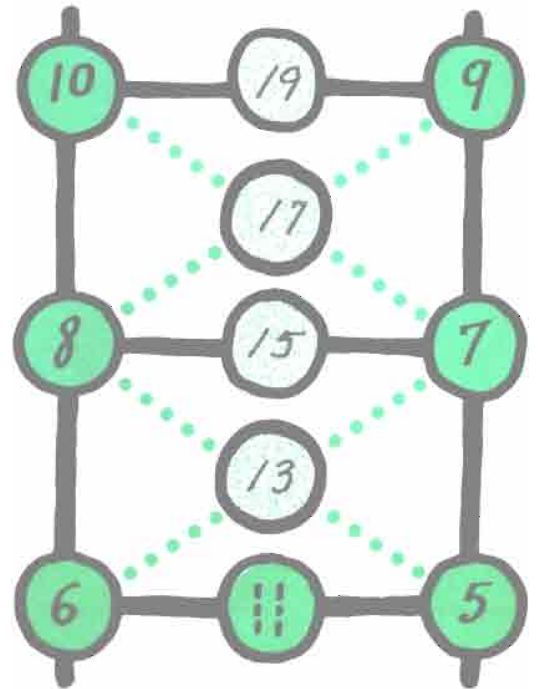
Más "Rompecabezas de 4 maneras"
(tal vez necesite objetos para contar)



Number Ladders



Escalera de Números





CHANGE FOR A QUARTER • CAMBIO DE UN VIENTICINCO

How many ways are there to make change for a quarter?

¿Cuántos maneras hay para hacer cambio para un veinticinco?

10¢

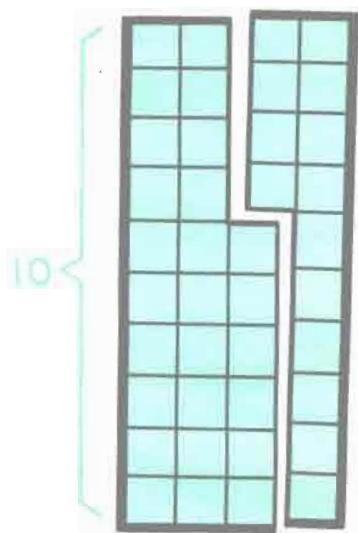
5¢

1¢

number of
coins used
número de
monedas usadas

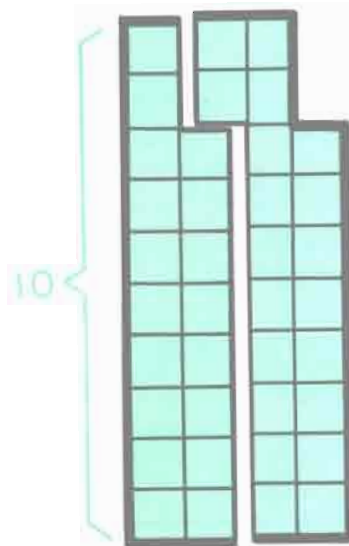
1	2	1	0	3
2	2	0	5	7
3	1	3	0	4
4	1	2	5	8
5	1	1	10	12
6	1	0	15	16
7		5	0	5
8		4	5	9
9		3	10	13
10		2	15	17
11		1	20	21
12		0	25	25
13	The last column gives the important clue for figuring out the coins needed to make a quarter. There is only one combination which			
14	uses that certain number of coins indicated in the last column.			
15	This is only one of the orders in which to record the combinations.			

What Do You see?

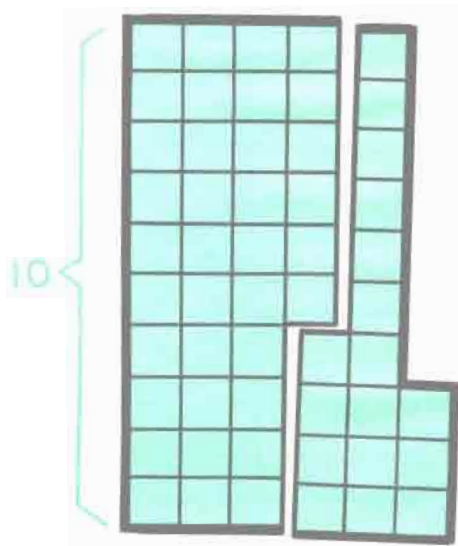


$$\begin{array}{r} 40 \\ - 14 \\ \hline 26 \end{array} \quad \begin{array}{r} 40 \\ - 26 \\ \hline 14 \end{array} \quad \begin{array}{r} 26 \\ + 14 \\ \hline 40 \end{array} \quad \begin{array}{r} 14 \\ + 26 \\ \hline 40 \end{array}$$

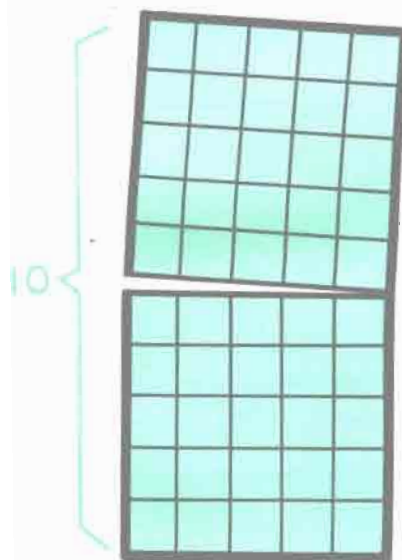
¿Qué Ve Usted?



$$\begin{array}{r} 38 \\ - 20 \\ \hline 18 \end{array} \quad \begin{array}{r} 38 \\ - 18 \\ \hline 20 \end{array} \quad \begin{array}{r} 20 \\ + 18 \\ \hline 38 \end{array} \quad \begin{array}{r} 18 \\ + 20 \\ \hline 38 \end{array}$$

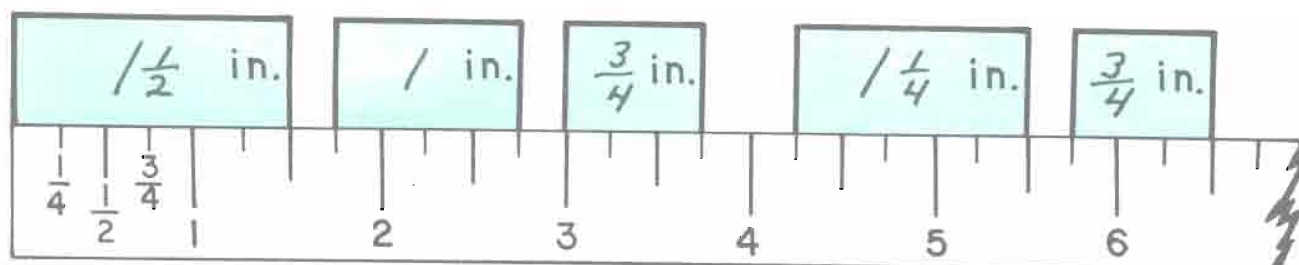
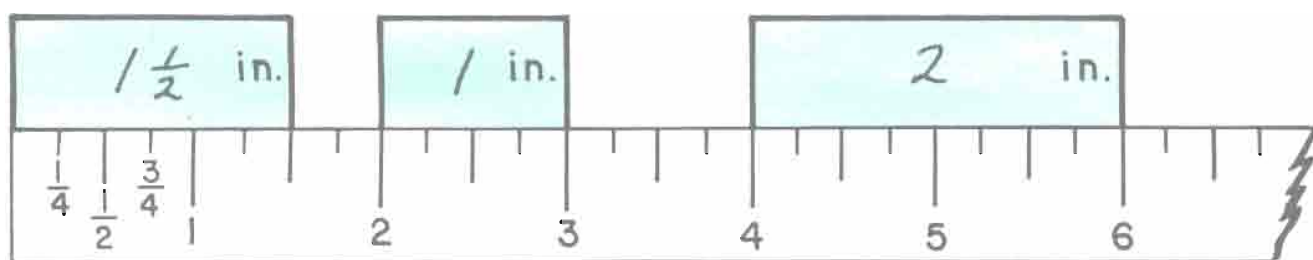
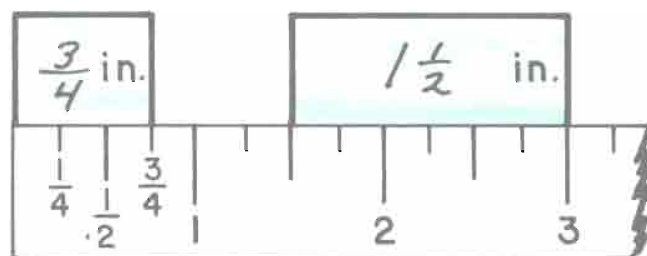
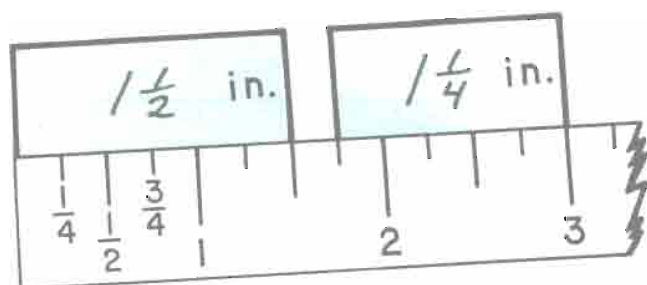
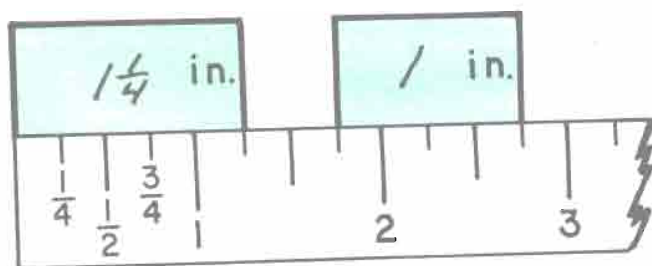
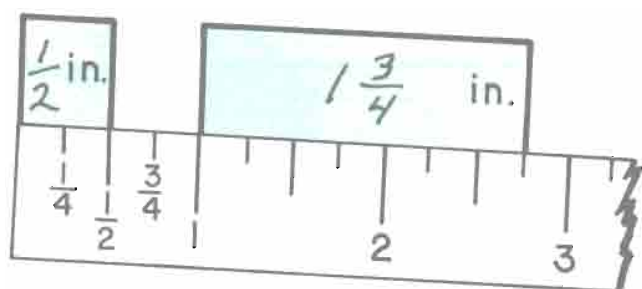
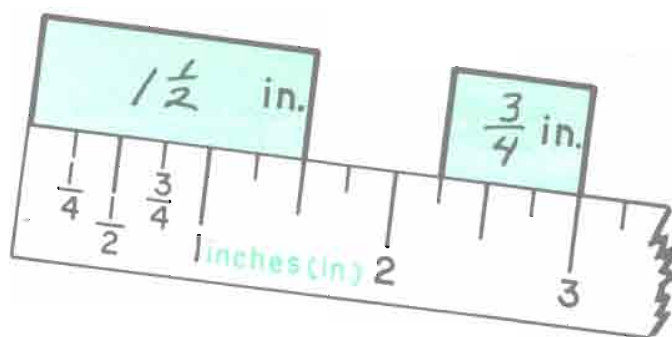
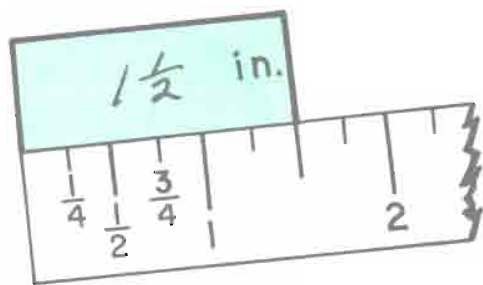


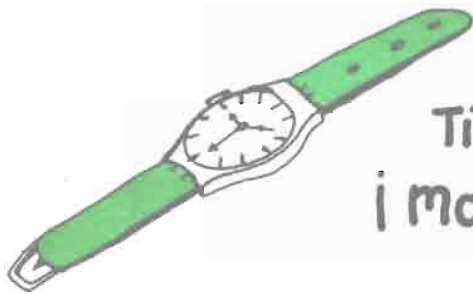
$$\begin{array}{r} 53 \\ - 17 \\ \hline 36 \end{array} \quad \begin{array}{r} 53 \\ - 36 \\ \hline 17 \end{array} \quad \begin{array}{r} 36 \\ + 17 \\ \hline 53 \end{array} \quad \begin{array}{r} 17 \\ + 36 \\ \hline 53 \end{array}$$



See also: D.I. pp. 60-109

$$\begin{array}{r} 50 \\ - 25 \\ \hline 25 \end{array} \quad \begin{array}{r} 25 \\ + 25 \\ \hline 50 \end{array}$$





Time yourself ! ¡ marque su tiempo !



Materials needed: A stopwatch or several watches with second hands. The children will need to work with partners to do this page.

my guess
mi cálculo

actual time
tiempo correcto

Print your name 5 times with your right hand.
Escriba su nombre 5 veces con su mano derecha.

Print your name 5 times with your left hand.
Escriba su nombre 5 veces con su mano izquierda.

Print your name backwards 5 times.
Escriba su nombre al revés 5 veces.

Say "She sells seashells" 5 times.
Diga "Rápidos corren los carros" 5 veces.

Slide down your playground slide 5 times.
Resbálece en el resbaladero de recreo 5 veces.

my guess mi cálculo	actual time tiempo correcto



Rules for "From the List":

Use only numbers "from the list". Do not use the same number twice in any one sentence.

Reglas para "De la Lista":

Use solamente números "de la lista". No use el mismo número dos veces en ninguna oración.

2 3 5 7 8 10 13 15

$$\underline{5 + 3 = 8}$$

$$\underline{2 + 3 = 5}$$

$$\underline{5 + 8 = 13}$$

$$\underline{15 - 10 = 5}$$

$$\underline{10 - 7 = 3}$$

$$\underline{13 - 8 = 5}$$

$$\underline{7 + 8 = 15}$$

3 4 6 9 11 12 15 16 20

$$\underline{3 + 6 = 9}$$

$$\underline{15 - 11 = 4}$$

$$\underline{6 + 9 = 15}$$

$$\underline{20 - 11 = 9}$$

$$\underline{11 + 4 = 15}$$

$$\underline{12 - 6 = 6}$$

$$\underline{12 + 4 = 16}$$

Please make up your own lists.

Favor de hacer sus propias listas de números.

$$\underline{\quad + \quad = \quad}$$

$$\underline{\quad + \quad = \quad}$$

$$\underline{\quad + \quad = \quad}$$

$$\underline{\quad - \quad = \quad}$$

$$\underline{\quad - \quad = \quad}$$

$$\underline{\quad - \quad = \quad}$$

$$\underline{\quad + \quad = \quad}$$

$$\underline{\quad + \quad = \quad}$$

$$\underline{\quad + \quad = \quad}$$

$$\underline{\quad - \quad = \quad}$$

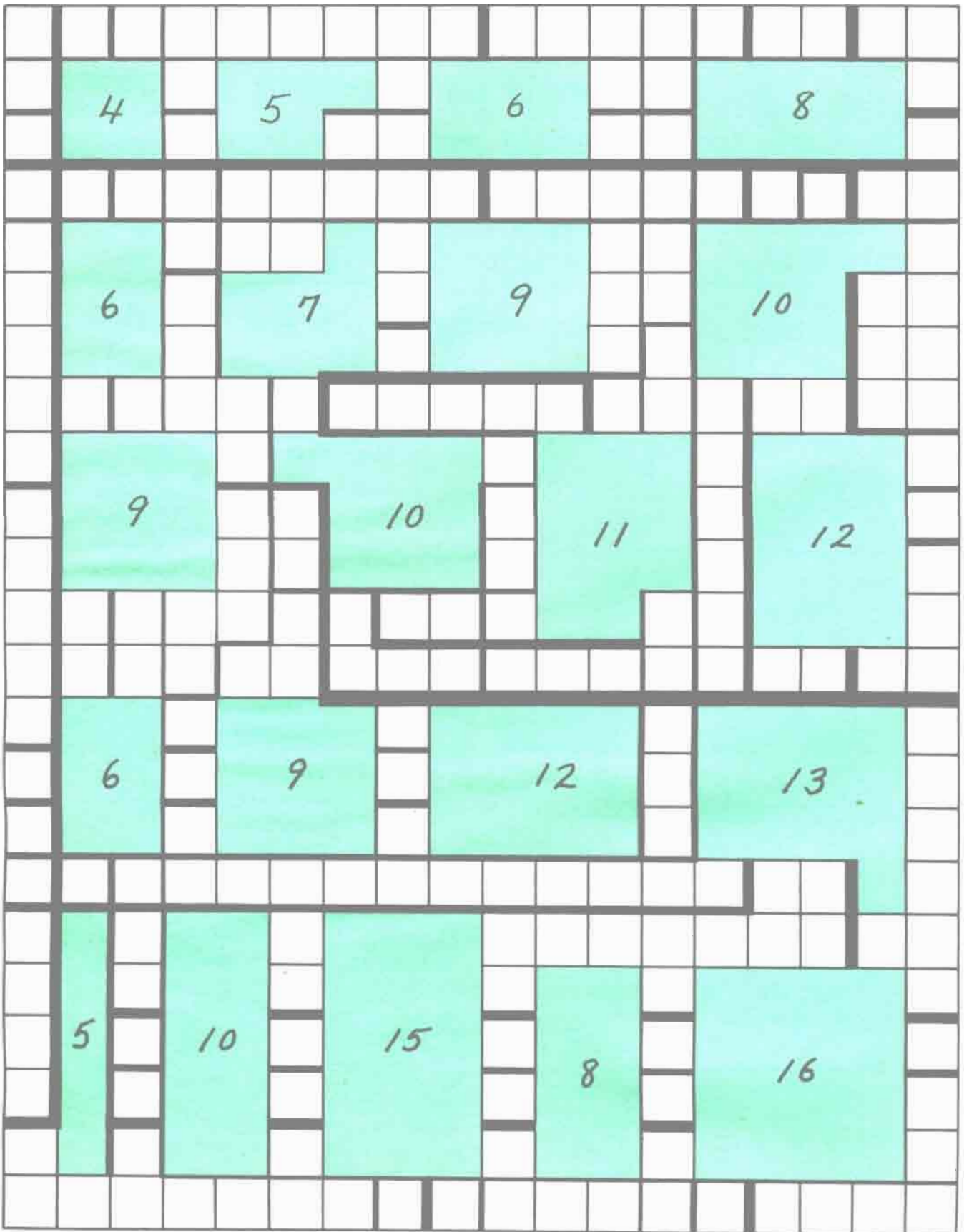
$$\underline{\quad - \quad = \quad}$$

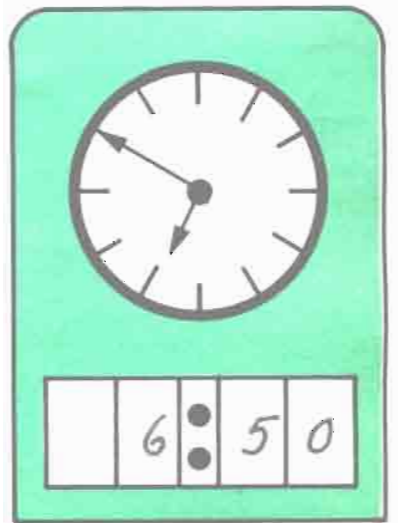
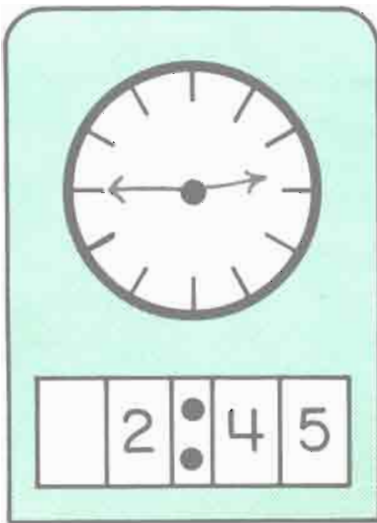
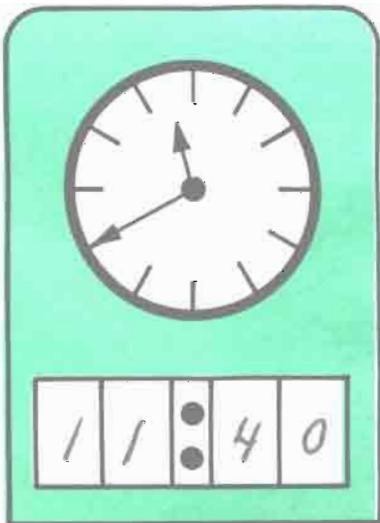
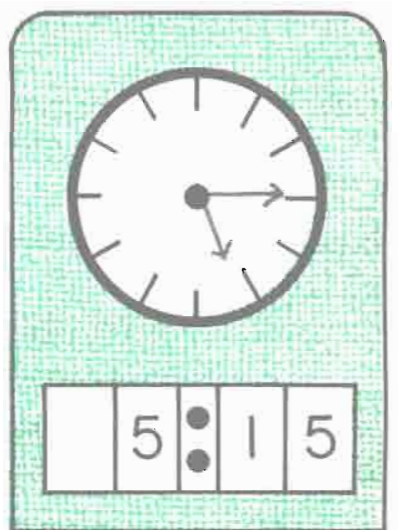
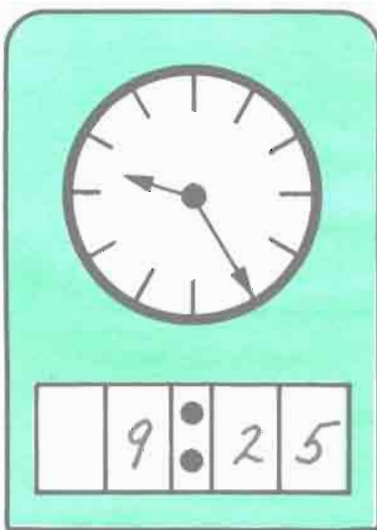
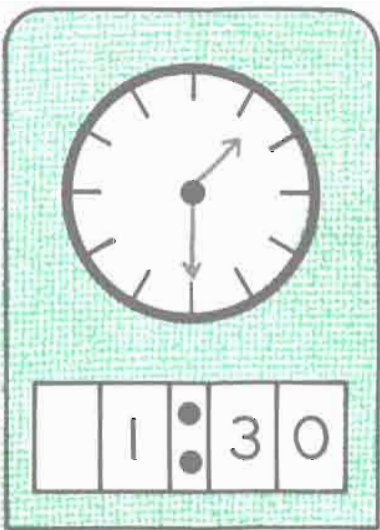
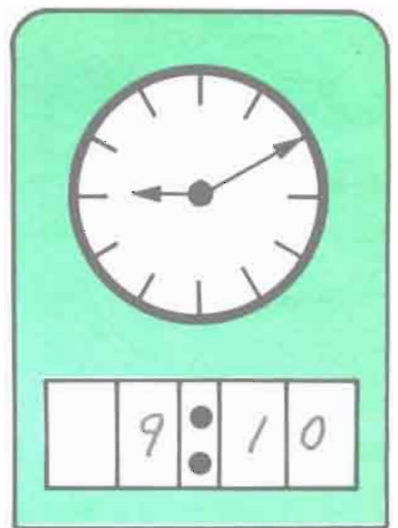
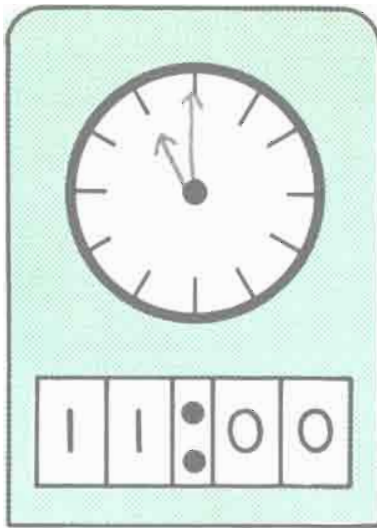
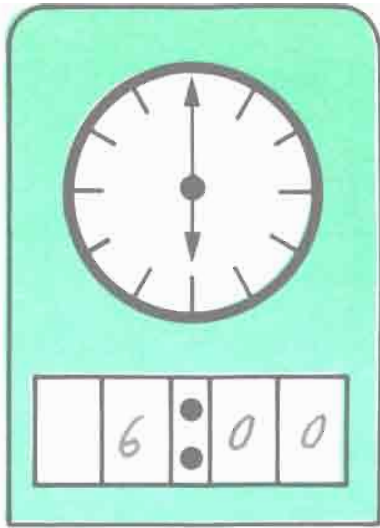
$$\underline{\quad - \quad = \quad}$$

See also: D&P pp. 143-148

How many blocks are colored?

¿Cuántos cuadros están pintados de color?





1 2 3 4 5 6 7 8 9 10

2 4 6 8 10 12 14 16 18 20

$$\underline{9 - 3 = 6}$$

$$\underline{2 + 4 = 6}$$

$$\underline{9 = 5 + 4}$$

$$\underline{4 = 20 - 16}$$

$$\underline{3 + 7 = 4 + 6}$$

$$\underline{18 - 16 = 12 - 10}$$

$$\underline{2 + 3 + 5 = 10}$$

$$\underline{4 + 6 - 8 = 2}$$

$$\underline{1 + 2 + 5 = 2 + 6}$$

$$\underline{6 + 8 - 10 = 2 + 2}$$

$$\underline{2 + 3 + 4 = 1 + 2 + 6}$$

$$\underline{10 + 4 + 6 = 12 + 6 + 2}$$

Please make up your own lists of numbers.

Favor de hacer sus propias listas de números.

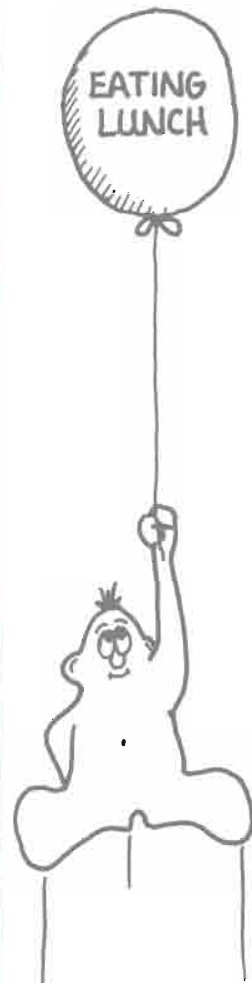
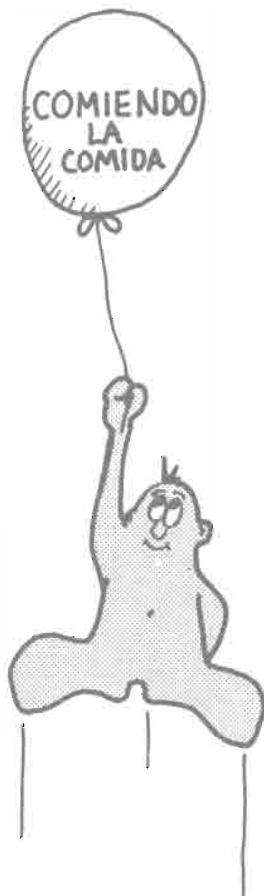
$$\begin{array}{l} \underline{\quad + \quad = \quad} \\ \underline{\quad + \quad = \quad} \\ \underline{\quad + \quad = \quad} \\ \underline{\quad - \quad = \quad} \end{array}$$

$$\begin{array}{l} \underline{\quad + \quad = \quad} \\ \underline{\quad - \quad = \quad} \\ \underline{\quad + \quad = \quad} \\ \underline{\quad - \quad = \quad} \end{array}$$

$$\begin{array}{l} \underline{\quad = \quad + \quad} \\ \underline{\quad = \quad - \quad} \\ \underline{\quad = \quad + \quad} \\ \underline{\quad = \quad - \quad} \\ \underline{\quad + \quad = \quad - \quad} \end{array}$$

$$\begin{array}{l} \underline{\quad - \quad = \quad} \\ \underline{\quad = \quad + \quad} \\ \underline{\quad + \quad + \quad = \quad} \\ \underline{\quad - \quad = \quad - \quad} \\ \underline{\quad + \quad + \quad = \quad + \quad} \end{array}$$

See page 43 for instructions.



30			
29			
28			
27			
26			
25			
24			
23			
22			
21			
20			
19			
18			
17			
16			
15			
14			
13			
12			
11			
10			
9			
8			
7			
6			
5			
4			
3			
2			
1			

Niños de su clase
Children in the class



comida
caliente

hot
lunch



traen su comida
bring lunch



comen en casa
eat at home

From the List: No numbers are to be repeated in any one example

De la Lista: Ningún número debe de repetirse en ningún ejemplo.

1, 2, 3, 4, 5, 6

$$\begin{array}{r} 1 \\ \hline 3 \\ \hline + 5 \\ \hline 9 \end{array}$$
$$\begin{array}{r} 1 \\ \hline 2 \\ \hline + 6 \\ \hline 9 \end{array}$$
$$\begin{array}{r} 2 \\ \hline 3 \\ \hline + 4 \\ \hline 9 \end{array}$$

$$\begin{array}{r} 5 \\ \hline 4 \\ \hline + 1 \\ \hline 10 \end{array}$$
$$\begin{array}{r} 6 \\ \hline 3 \\ \hline + 1 \\ \hline 10 \end{array}$$
$$\begin{array}{r} 5 \\ \hline 3 \\ \hline + 2 \\ \hline 10 \end{array}$$

$$\begin{array}{r} 6 \\ \hline 4 \\ \hline + 1 \\ \hline 11 \end{array}$$
$$\begin{array}{r} 6 \\ \hline 2 \\ \hline + 3 \\ \hline 11 \end{array}$$
$$\begin{array}{r} 5 \\ \hline 4 \\ \hline + 2 \\ \hline 11 \end{array}$$

$$\begin{array}{r} 6 \\ \hline 4 \\ \hline + 2 \\ \hline 12 \end{array}$$
$$\begin{array}{r} 6 \\ \hline 5 \\ \hline + 1 \\ \hline 12 \end{array}$$
$$\begin{array}{r} 5 \\ \hline 4 \\ \hline + 3 \\ \hline 12 \end{array}$$

3, 4, 5, 6, 7, 8

$$\begin{array}{r} 8 \\ \hline 4 \\ \hline + 3 \\ \hline 15 \end{array}$$
$$\begin{array}{r} 7 \\ \hline 5 \\ \hline + 3 \\ \hline 15 \end{array}$$
$$\begin{array}{r} 6 \\ \hline 5 \\ \hline + 4 \\ \hline 15 \end{array}$$

$$\begin{array}{r} 8 \\ \hline 5 \\ \hline + 3 \\ \hline 16 \end{array}$$
$$\begin{array}{r} 7 \\ \hline 6 \\ \hline + 3 \\ \hline 16 \end{array}$$
$$\begin{array}{r} 7 \\ \hline 4 \\ \hline + 5 \\ \hline 16 \end{array}$$

$$\begin{array}{r} 8 \\ \hline 6 \\ \hline + 3 \\ \hline 17 \end{array}$$
$$\begin{array}{r} 8 \\ \hline 5 \\ \hline + 4 \\ \hline 17 \end{array}$$
$$\begin{array}{r} 7 \\ \hline 6 \\ \hline + 4 \\ \hline 17 \end{array}$$

$$\begin{array}{r} 8 \\ \hline 7 \\ \hline + 3 \\ \hline 18 \end{array}$$
$$\begin{array}{r} 8 \\ \hline 6 \\ \hline + 4 \\ \hline 18 \end{array}$$
$$\begin{array}{r} 7 \\ \hline 6 \\ \hline + 5 \\ \hline 18 \end{array}$$



1¢



5¢



10¢



25¢

Use the number of coins shown.

Use la cantidad de monedas mostradas.

See also: D&P pp. 156-165

3¢

1¢ 1¢ 1¢

8¢

5¢ 1¢ 1¢ 1¢

15¢

5¢ 5¢ 5¢

13¢

10¢ 1¢ 1¢ 1¢

7¢

5¢ 1¢ 1¢

12¢

5¢ 5¢ 1¢ 1¢

12¢

10¢ 1¢ 1¢

25¢

10¢ 5¢ 5¢ 5¢

33¢

10¢ 10¢ 10¢ 1¢ 1¢ 1¢

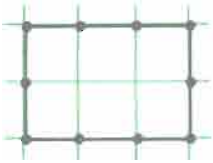
30¢

5¢ 5¢ 5¢ 5¢ 5¢ 5¢

or 25¢ 1¢ 1¢ 1¢ 1¢ 1¢

51¢

25¢ 10¢ 5¢ 5¢ 5¢ 1¢

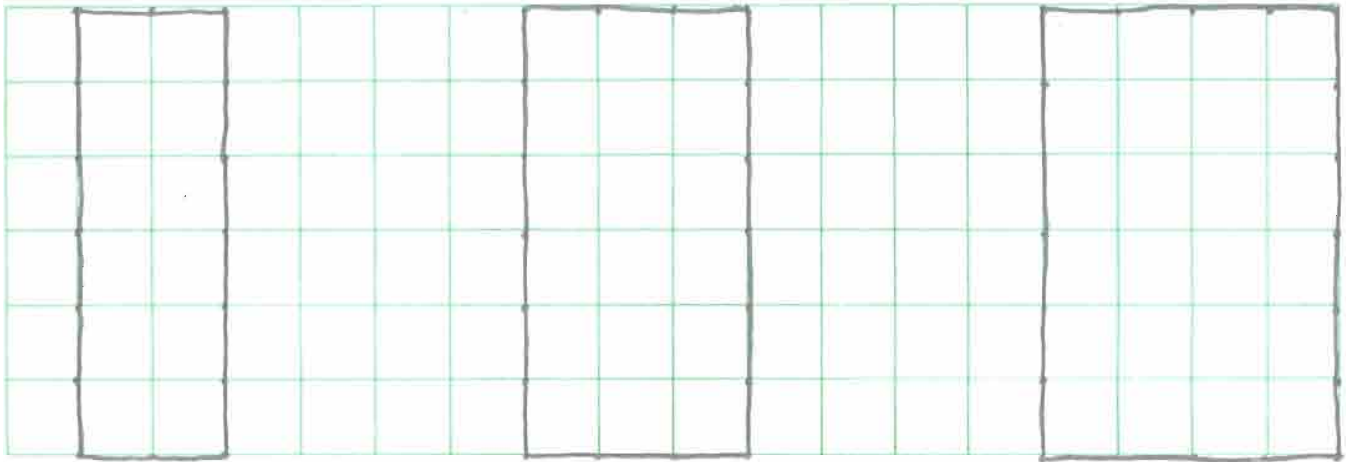


10

6

Please draw the sketches.

Favor de hacer los dibujos.



16

12

18

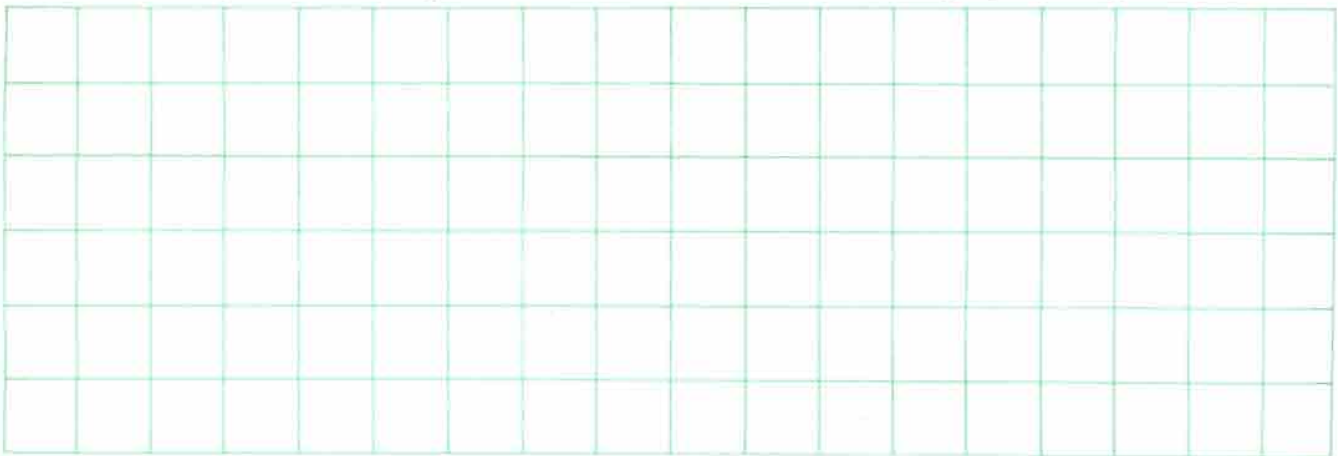
18

20

24

Please make up sketches of your own.

Favor de hacer sus propios dibujos.



—

—

—

Peanut Butter Balls

Bolas de Manteca de Cacahuete

Beat together
Bata juntos

1 well beaten egg
 $\frac{1}{8}$ tsp. (teaspoon) salt
1 cup sifted confectioners' sugar
 $\frac{1}{2}$ tsp. vanilla
1 tblsp. (tablespoon) butter
 $\frac{1}{2}$ cup peanut butter

1 huevo bien batido
 $\frac{1}{8}$ cucharadita de sal
1 taza de azúcar de confitero cernido
 $\frac{1}{2}$ cucharadita de vainilla
1 cucharada de mantequilla
 $\frac{1}{2}$ taza de manteca de cacahuete

Then stir in 1 cup more sifted confectioners' sugar
Entonces amase con 1 taza más de azúcar de confitero cernido

Add more confectioners' sugar if needed to make firm enough to handle. Shape into tiny balls.
Añada más azúcar de confitero si se necesita para que sea bastante firme para manosear. Forme en bolas pequeñas.

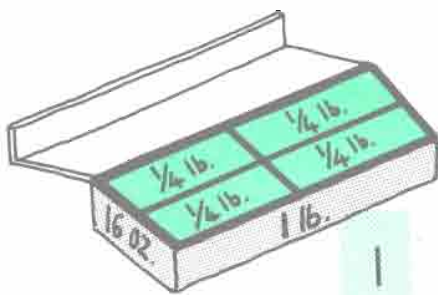
Roll each ball in $\frac{3}{4}$ cup chopped salted peanuts.
Place on waxed paper and refrigerate to set.
Arrolle cada bola en $\frac{3}{4}$ taza de cacahuetes salados cortados.
Ponga sobre papel encerado y refrigere hasta que sea más firme.



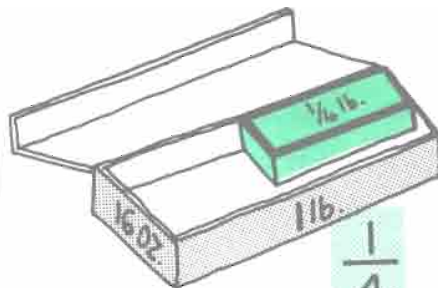
You may need to double or triple this recipe for the children to make enough for the whole class at once.

What Can You See?

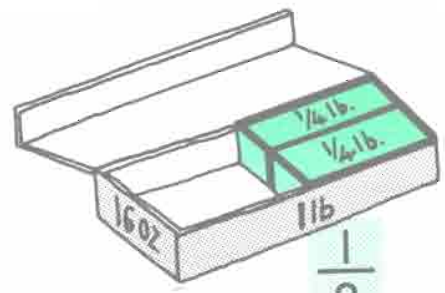
¿Qué Puede Usted Ver?



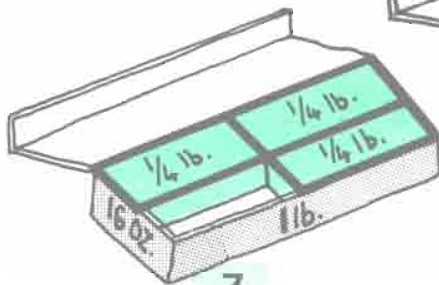
1



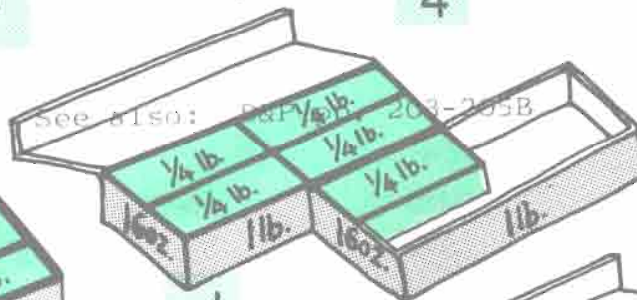
$\frac{1}{4}$



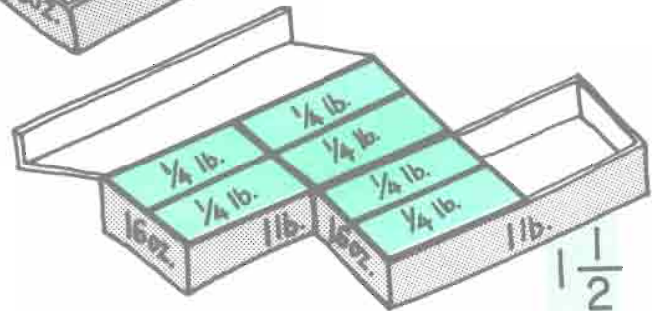
$\frac{1}{2}$



$\frac{3}{4}$



$1\frac{1}{4}$



$1\frac{1}{2}$

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

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

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

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

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

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

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

$$\frac{5}{4} = 1\frac{1}{4}$$

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

$$\frac{6}{4} = 1\frac{1}{2}$$

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

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

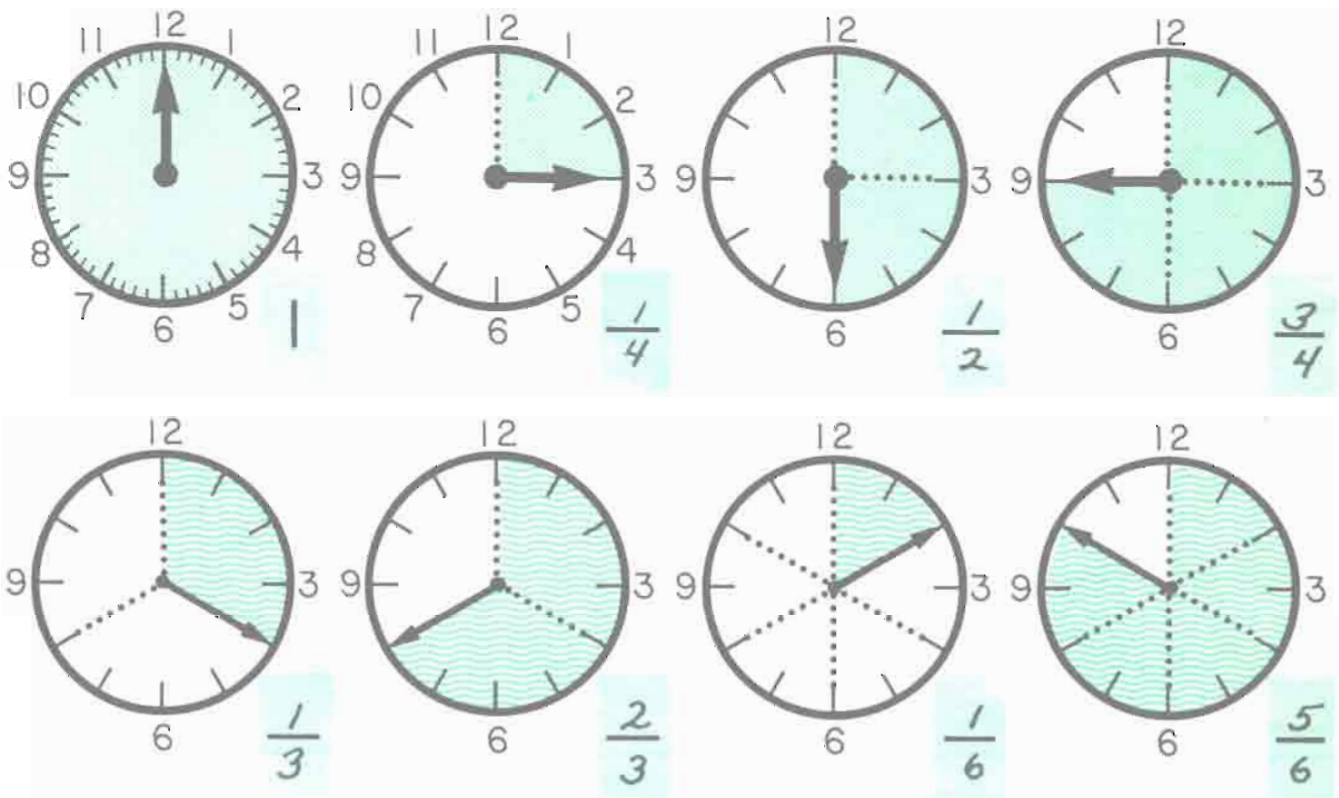
$$\frac{3}{4} + \frac{1}{2} = 1\frac{1}{4}$$

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

What Can You See?

¿Qué Puede Usted Ver?

See also: D&P pp. 203-205B



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

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

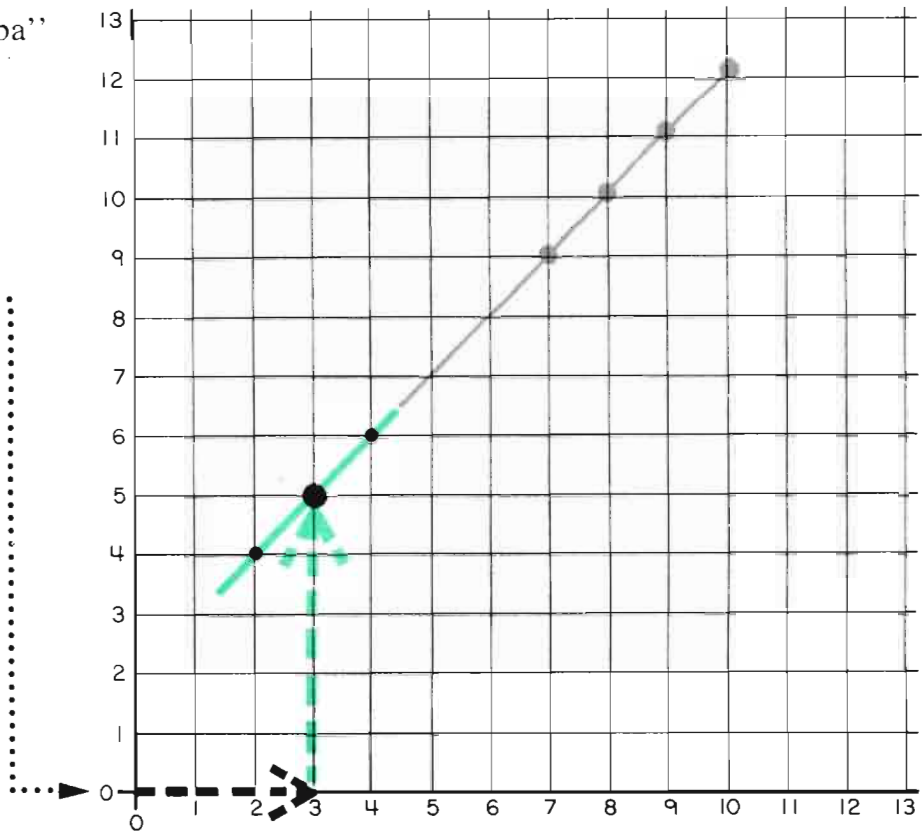
$$\frac{1}{6} + \frac{1}{6} + \frac{1}{6} = \frac{3}{6} = \frac{1}{2} \quad \frac{1}{3} + \frac{1}{3} = \frac{2}{3} \quad \frac{1}{3} + \frac{1}{2} = \frac{5}{6}$$

$$\frac{1}{3} - \frac{1}{6} = \frac{1}{6} \quad \frac{5}{6} - \frac{1}{6} = \frac{4}{6} = \frac{2}{3} \quad \frac{2}{2} = \frac{3}{3} = \frac{4}{4} = \frac{6}{6} = 1$$

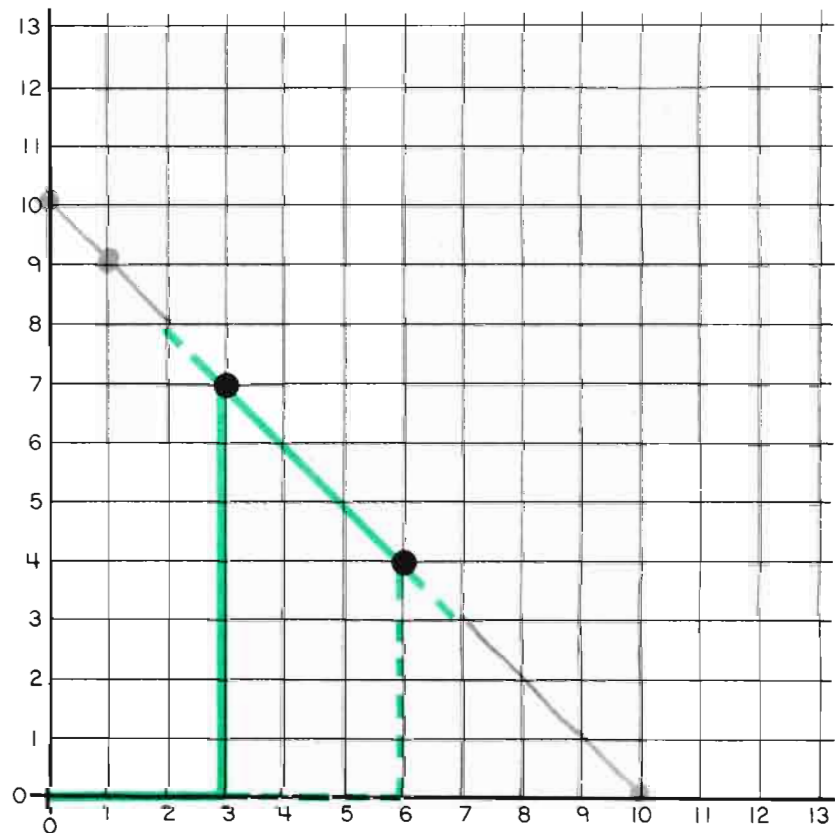
“Over and up”

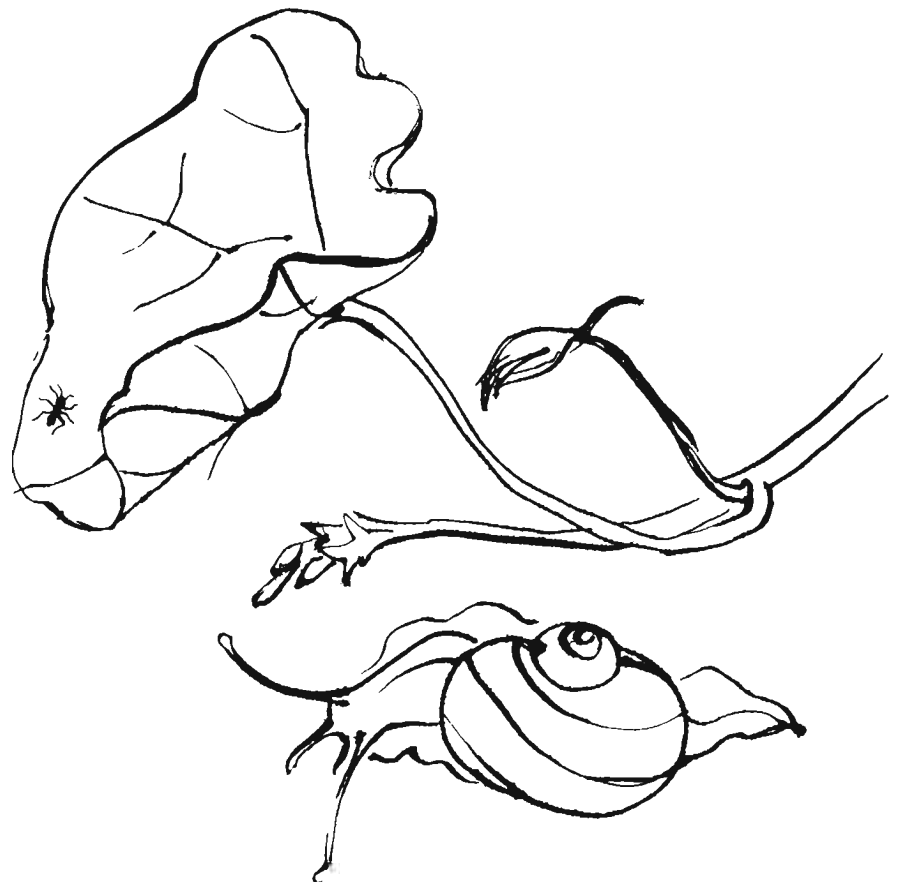
“A la derecha y hacia arriba”

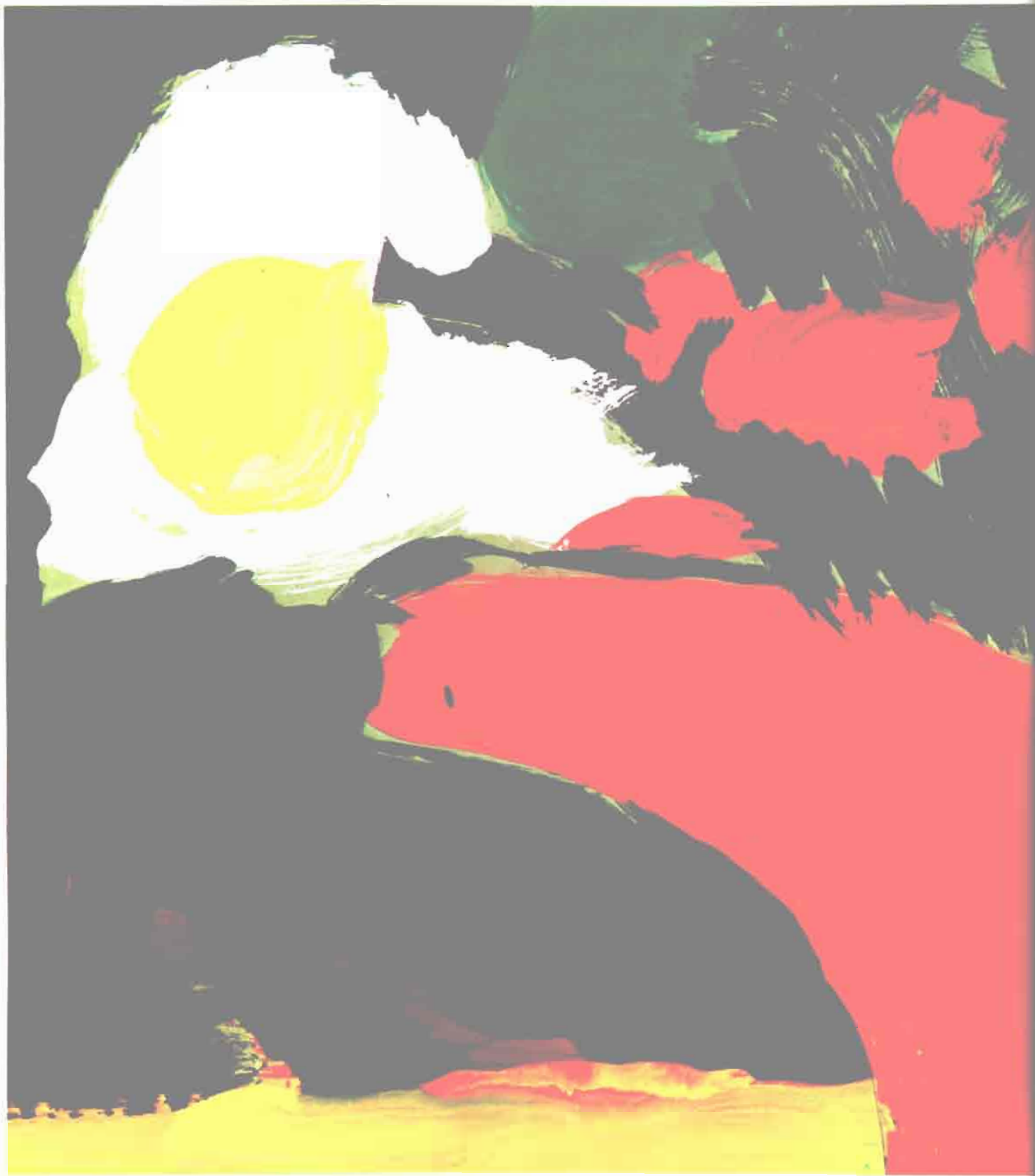
n	$n+2$
3	5
4	6
2	4
7	9
9	11
8	10
10	12



a	$10-a$
3	7
6	4
1	9
7	3
5	5
0	10
10	0







*this
book
belongs
to* _____

*es
libr
es d*

