

Modeling and Solving Number Stories

Use bar models to solve these equations. Check your answers.

① $4a + 12 = 96$ Solution: $a = 21$ Check: $4 * 21 + 12 = 96$

$4a$	12
96	

a	a	a	a	12
84				12

a	a	a	a	12
21	21	21	21	12

② $6d + 7 = d + 22$ Solution: $d = 3$ Check: $6 * 3 + 7 = 3 + 22$

$6d$	7
d	22

d	$5d$	7
d	15	7

d	d	d	d	d	d	7
d	3	3	3	3	3	7

Use bar models to solve the problems.

Sample diagrams shown.

③ Jane is 6 years older than twice Martin's age.

Let s be Martin's age.

Write an expression to represent Jane's age. $2s + 6$

The sum of Jane's and Martin's ages is 39.

Write an equation to represent the situation. $2s + 6 + s = 39$

How old are Jane and Martin? Jane: 28 years old Martin: 11 years old

$2s$	6	s
39		

$2s$	s	6
33		6

s	s	s	6
11	11	11	6

Try This

④ Dan is thinking of a number. He doubles his number and adds 15.

He multiplies his number by 5 and gets the same answer. Let n be Dan's number.

Write an equation to represent the situation. $2n + 15 = 5n$

Dan's number: 5

$2n + 15$
$5n$

$2n$	15
$2n$	$3n$

$2n$	5	5	5
$2n$	n	n	n

Practice Solve.

⑤ $5 * (6.8 - 2) = 24$ ⑥ $8 \div 2 * 3.5 = 14$ ⑦ $9.43 - 4.5 + 1.7 = 6.63$