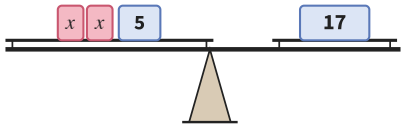
Solving two-step equations

ANSWERS

1

Solve $2x + 5 = 17$



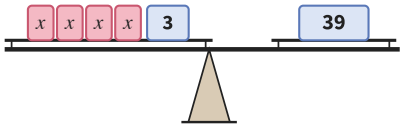
$2x = 12$ — − 5 both sides

$x = 6$ — ÷ 2 both sides

Answer $x = 6$

2

Solve $4x + 3 = 39$



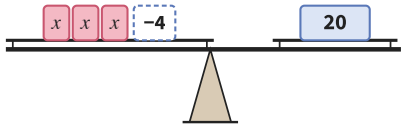
$4x = 36$ — − 3 both sides

$x = 9$ — ÷ 4 both sides

Answer $x = 9$

3

Solve $3x - 4 = 20$



$3x = 24$ — + 4 both sides

$x = 8$ — ÷ 3 both sides

Answer $x = 8$

4

Solve $7x - 2 = 26$

$7x = 28$ — + 2 both sides

$x = 4$ — ÷ 7 both sides

Answer $x = 4$

5

Solve $4x + 15 = 3$

$4x = -12$ — − 15 both sides

$x = -3$ — ÷ 4 both sides

Answer $x = -3$

6

Jo solves $3x + 9 = 24$.

She writes $x + 9 = 8$, so $x = -1$.

What has she done wrong?

Solve the equation.

She only divided the 3x, not the 9

$3x = 15$ (− 9 both sides)

Answer $x = 5$

7

Solve $\frac{x}{2} + 4 = 10$

$\frac{x}{2} = 6$ — − 4 both sides

$x = 12$ — × 2 both sides

Answer $x = 12$

8

Tom has 6 packs of stickers with p stickers in each pack, and 5 loose stickers. He has 47 stickers altogether. Solve $6p + 5 = 47$ to find p.

$6p = 42$ (− 5 both sides)

$p = 7$ (÷ 6 both sides)

Answer 7 stickers

Solving two-step equations *further practice*

ANSWERS

9

Solve $9x - 4 = 41$.

$9x = 45$ (+ 4 both sides)

$x = 5$ (÷ 9 both sides)

Answer $x = 5$

10

Solve $30 = 4x + 2$.

$28 = 4x$ (– 2 both sides)

$x = 7$ (÷ 4 both sides)

Answer $x = 7$

11

Solve $5y + 28 = 8$.

$5y = -20$ (– 28 both sides)

$y = -4$ (÷ 5 both sides)

Answer $y = -4$

12

I think of a number. I divide it by 5, then take away 2. The answer is 4.
What is my number?

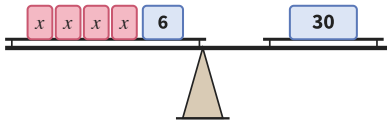
$n \div 5 - 2 = 4$

$n \div 5 = 6$, so $n = 30$

Answer 30

13

The balance shows an equation.
Write the equation, then solve it.



$4x + 6 = 30$

$4x = 24$, $x = 6$

Answer $x = 6$

14

Solve $4x - 3 = 7$.

$4x = 10$ (+ 3 both sides)

$x = 2.5$ (÷ 4 both sides)

Answer $x = 2.5$

15

Ana buys 4 cinema tickets that cost £t each, and a £7 bag of popcorn.
She pays £39 altogether.
Solve $4t + 7 = 39$ to find the price of one ticket.

$4t = 32$

$t = 8$

Answer £8

16

Mia says $7x + 2 = 30$ and $7x - 2 = 26$ have the same answer. Is she right?
Show how you know.

$7x + 2 = 30$: $7x = 28$, $x = 4$

$7x - 2 = 26$: $7x = 28$, $x = 4$

Answer Yes, both $x = 4$