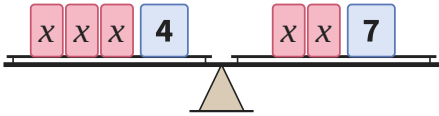


Equations: the Unknown on Both Sides

ANSWERS

1

Solve $3x + 4 = 2x + 7$



$- 2x$ both sides

$x + 4 = 7$

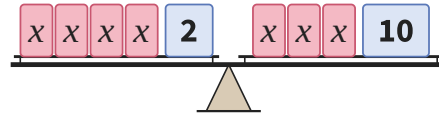
$- 4$ both sides

$x = 3$

Answer $x = 3$

2

Solve $4x + 2 = 3x + 10$



$- 3x$ both sides

$x + 2 = 10$

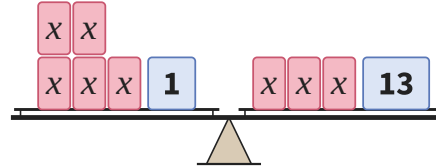
$- 2$ both sides

$x = 8$

Answer $x = 8$

3

Solve $5x + 1 = 3x + 13$



$- 3x$ both sides

$2x + 1 = 13$

$- 1$ both sides

$2x = 12$

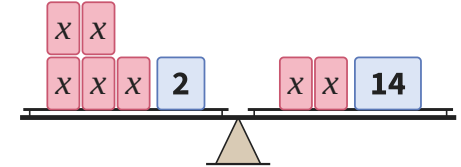
$\div 2$ both sides

$x = 6$

Answer $x = 6$

4

Solve $5x + 2 = 2x + 14$



$- 2x$ both sides

$3x + 2 = 14$

$- 2$ both sides

$3x = 12$

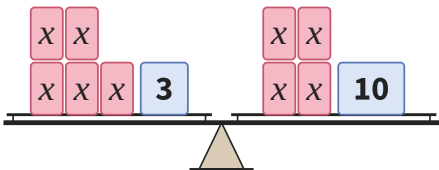
$\div 3$ both sides

$x = 4$

Answer $x = 4$

5

Solve $5x + 3 = 4x + 10$



$- 4x$ both sides

$x + 3 = 10$

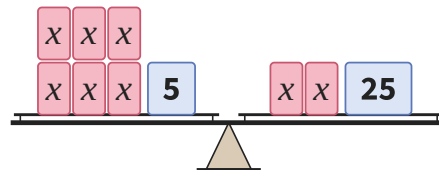
$- 3$ both sides

$x = 7$

Answer $x = 7$

6

Solve $6x + 5 = 2x + 25$



$- 2x$ both sides

$4x + 5 = 25$

$- 5$ both sides

$4x = 20$

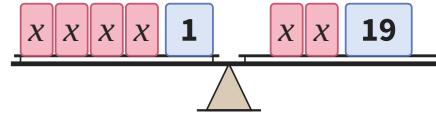
$\div 4$ both sides

$x = 5$

Answer $x = 5$

7

Write the equation for this balance. Then solve it.



Equation

$4x + 1 = 2x + 19$

$- 2x$ both sides

$2x + 1 = 19$

$- 1$ both sides

$2x = 18$

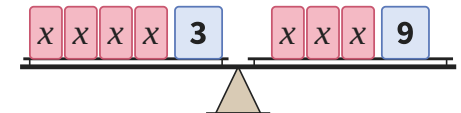
$\div 2$ both sides

$x = 9$

Answer $x = 9$

8

Each bag holds x sweets. 4 bags and 3 sweets is the same as 3 bags and 9 sweets. Find x .



Equation

$4x + 3 = 3x + 9$

$- 3x$ both sides

$x + 3 = 9$

$- 3$ both sides

$x = 6$

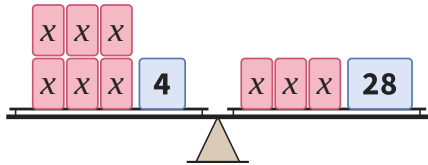
Answer $x = 6$

Equations: the Unknown on Both Sides *further practice*

ANSWERS

9

Solve $6x + 4 = 3x + 28$



$- 3x$ both sides $3x + 4 = 28$

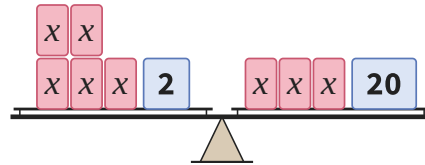
$- 4$ both sides $3x = 24$

$\div 3$ both sides $x = 8$

Answer $x = 8$

10

Solve $5y + 2 = 3y + 20$



$- 3y$ both sides $2y + 2 = 20$

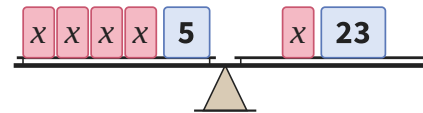
$- 2$ both sides $2y = 18$

$\div 2$ both sides $y = 9$

Answer $y = 9$

11

Solve $4x + 5 = x + 23$



$- x$ both sides $3x + 5 = 23$

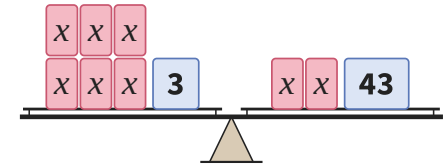
$- 5$ both sides $3x = 18$

$\div 3$ both sides $x = 6$

Answer $x = 6$

12

Solve $6x + 3 = 2x + 43$



$- 2x$ both sides $4x + 3 = 43$

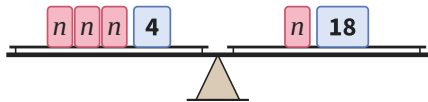
$- 3$ both sides $4x = 40$

$\div 4$ both sides $x = 10$

Answer $x = 10$

13

My number is n . Three times my number add 4 is the same as my number add 18. Find n .



Equation $3n + 4 = n + 18$

$- n$ both sides $2n + 4 = 18$

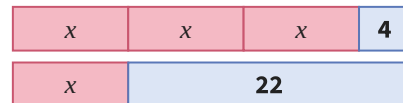
$- 4$ both sides $2n = 14$

$\div 2$ both sides $n = 7$

Answer $n = 7$

14

These two rows are the same length. Find x .



Equation $3x + 4 = x + 22$

$- x$ both sides $2x + 4 = 22$

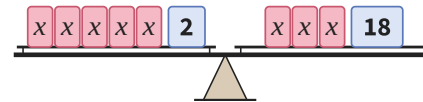
$- 4$ both sides $2x = 18$

$\div 2$ both sides $x = 9$

Answer $x = 9$

15

Each pack has x cards. 5 packs and 2 cards is the same as 3 packs and 18 cards. Find x .



Equation $5x + 2 = 3x + 18$

$- 3x$ both sides $2x + 2 = 18$

$- 2$ both sides $2x = 16$

$\div 2$ both sides $x = 8$

Answer $x = 8$

16

Sam has made a mistake. What is it?

Sam solves $4x + 3 = 2x + 15$

$- 2x$ both sides $6x + 3 = 15$

$- 3$ both sides $6x = 12$

$\div 6$ both sides $x = 2$

Sam's mistake is adding $2x$

$2x + 3 = 15$

The answer is $x = 6$