

Two-step equations

Solve each equation. Show your working, and write the answer on the line.

Name _____ Date _____

1. $3x + 5 = 26$

x = _____

2. $8 = 4x - 12$

x = _____

3. $5 = \frac{x}{4} + 4$

x = _____

4. $9x + 17 = 125$

x = _____

5. $10 + 3x = 40$

x = _____

6. $8x - 4 = 76$

x = _____

7. $\frac{x}{7} + 2 = 9$

x = _____

8. $8x + 16 = 40$

x = _____

9. $20 + 4x = 40$

x = _____

10. $31 = 4x - 5$

x = _____

11. $\frac{x}{9} + 15 = 19$

x = _____

12. $5x + 7 = 67$

x = _____

Two-step equations: answer key

Each equation worked one step a line. What was done to both sides is beside each step.

1. $3x + 5 = 26$

$3x = 21$ Subtract 5 from both sides.

$x = 7$ Divide both sides by 3.

Check: $3(7) + 5 = 26$

2. $8 = 4x - 12$

$20 = 4x$ Add 12 to both sides.

$5 = x$ Divide both sides by 4.

$x = 5$

Check: $8 = 4(5) - 12$

3. $5 = \frac{x}{4} + 4$

$1 = \frac{x}{4}$ Subtract 4 from both sides.

$4 = x$ Multiply both sides by 4.

$x = 4$

Check: $5 = \frac{4}{4} + 4$

4. $9x + 17 = 125$

$9x = 108$ Subtract 17 from both sides.

$x = 12$ Divide both sides by 9.

Check: $9(12) + 17 = 125$

5. $10 + 3x = 40$

$3x = 30$ Subtract 10 from both sides.

$x = 10$ Divide both sides by 3.

Check: $10 + 3(10) = 40$

6. $8x - 4 = 76$

$8x = 80$ Add 4 to both sides.

$x = 10$ Divide both sides by 8.

Check: $8(10) - 4 = 76$

7. $\frac{x}{7} + 2 = 9$

$\frac{x}{7} = 7$ Subtract 2 from both sides.

$x = 49$ Multiply both sides by 7.

Check: $\frac{49}{7} + 2 = 9$

8. $8x + 16 = 40$

$8x = 24$ Subtract 16 from both sides.

$x = 3$ Divide both sides by 8.

Check: $8(3) + 16 = 40$

9. $20 + 4x = 40$

$4x = 20$ Subtract 20 from both sides.

$x = 5$ Divide both sides by 4.

Check: $20 + 4(5) = 40$

10. $31 = 4x - 5$

$36 = 4x$ Add 5 to both sides.

$9 = x$ Divide both sides by 4.

$x = 9$

Check: $31 = 4(9) - 5$

11. $\frac{x}{9} + 15 = 19$

$\frac{x}{9} = 4$ Subtract 15 from both sides.

$x = 36$ Multiply both sides by 9.

Check: $\frac{36}{9} + 15 = 19$

12. $5x + 7 = 67$

$5x = 60$ Subtract 7 from both sides.

$x = 12$ Divide both sides by 5.

Check: $5(12) + 7 = 67$