

Linear Equations & Systems

Algebra · Grade 8

◆ Medium · 12 Questions

Solve each problem. Show your work in the space provided. Write your answer on the line.

1. Solve: $3x + 5 = 2x + 9$.

Answer: _____

2. Solve: $5x - 3 = 3x + 7$.

Answer: _____

3. Solve: $4(x + 2) = 20$.

Answer: _____

4. Solve: $2(3x - 1) = 4x + 6$.

Answer: _____

5. Solve: $x/2 + 3 = 7$.

Answer: _____

6. Solve: $(x + 1)/3 = 4$.

Answer: _____

7. A number is multiplied by 4 and then 6 is subtracted. The result is 18. Find the number.

Answer: _____

8. Solve: $7x = 3x + 24$.

Answer: _____

9. Solve: $2x + 1 = x + 8$.

Answer: _____

10. Solve: $3(2x - 4) = 2(x + 6)$.

Answer: _____

11. Solve: $x/4 - 2 = 1$.

Answer: _____

- 12.** Twice a number minus 5 equals the number plus 3. Find the number.

Answer: _____

Answer Key

Linear Equations & Systems — Medium

1. $x = 4$

Subtract $2x$: $x + 5 = 9$. Subtract 5 : $x = 4$.

2. $x = 5$

Subtract $3x$: $2x - 3 = 7$. Add 3 : $2x = 10$. $x = 5$.

3. $x = 3$

Expand: $4x + 8 = 20$. Subtract 8 : $4x = 12$. $x = 3$.

4. $x = 4$

Expand: $6x - 2 = 4x + 6$. Subtract $4x$: $2x - 2 = 6$. Add 2 : $2x = 8$. $x = 4$.

5. $x = 8$

Subtract 3 : $x/2 = 4$. Multiply by 2 : $x = 8$.

6. $x = 11$

Multiply by 3 : $x + 1 = 12$. Subtract 1 : $x = 11$.

7. 6

$4x - 6 = 18$. $4x = 24$. $x = 6$.

8. $x = 6$

Subtract $3x$: $4x = 24$. $x = 6$.

9. $x = 7$

Subtract x : $x + 1 = 8$. Subtract 1 : $x = 7$.

10. $x = 6$

$6x - 12 = 2x + 12$. $4x = 24$. $x = 6$.

11. $x = 12$

Add 2: $x/4 = 3$. Multiply by 4: $x = 12$.

12. 8

$2x - 5 = x + 3$. $x = 8$.
