

Algebra 2

Algebra · Grade 7

◆ Medium · 12 Questions

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

1. Solve: $3(x + 4) = 21$

Answer: _____

2. Solve: $2(3y - 1) = 16$

Answer: _____

3. Solve: $5x - 3 = 2x + 12$

Answer: _____

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

Answer: _____

5. Solve: $(x + 5)/2 = 7$

Answer: _____

6. A number is doubled and then 7 is subtracted. The result is 19. Find the number.

Answer: _____

7. Solve: $3x + 5 = x + 17$

Answer: _____

8. Solve: $6 - 3(x + 1) = -9$

Answer: _____

9. Perimeter of a rectangle is 38 cm. Length is 4 more than the width. Find both dimensions.

Answer: _____

10. Solve: $2(x - 3) = 3(x - 5)$

Answer: _____

11. Solve: $4x/3 - 2 = 6$

Answer: _____

- 12.** The sum of two numbers is 45. One number is 3 times the other. Find both.

Answer: _____

Answer Key

Algebra 2 — Medium

1. $x = 3$

Divide by 3: $x+4=7$. Subtract 4: $x=3$.

2. $y = 3$

Divide by 2: $3y-1=8$. Add 1: $3y=9$. $y=3$.

3. $x = 5$

$5x-2x=12+3$. $3x=15$. $x=5$.

4. $n = 4$

$4n-8+3n=20$. $7n-8=20$. $7n=28$. $n=4$. Check: $4(4-2)+3(4)=8+12=20$. ✓

5. $x = 9$

Multiply by 2: $x+5=14$. Subtract 5: $x=9$.

6. 13

$2n-7=19$. $2n=26$. $n=13$.

7. $x = 6$

$2x=12$. $x=6$.

8. $x = 4$

$6-3x-3=-9$. $3-3x=-9$. $-3x=-12$. $x=4$.

9. **Width = 7.5 cm; Length = 11.5 cm**

$2(w+w+4)=38$. $2(2w+4)=38$. $2w+4=19$. $2w=15$. $w=7.5$, $L=11.5$.

10. $x = 9$

$2x-6=3x-15$. $9=x$.

11. $x = 6$

Add 2: $4x/3=8$. Multiply by 3: $4x=24$. $x=6$.

12. 11.25 and 33.75

$n+3n=45$. $4n=45$. $n=11.25$. Other=33.75.
