

Algebra: Multi-Step

Algebra · Grade 7

★ Hard · 10 Questions

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

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

Answer: _____

2. Solve: $3(2x - 5) - 4(x + 1) = 11$

Answer: _____

3. Solve the inequality: $4x - 3 > 2x + 9$

Answer: _____

4. Solve: $3 - (2x + 4) = -5x + 9$

Answer: _____

5. Solve: $3x - 2(x - 4) = 5x - 12$

Answer: _____

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

Answer: _____

7. Solve: $(x - 1)/4 = (x + 5)/6$

Answer: _____

8. Solve the inequality: $3x + 4 \leq 19$

Answer: _____

9. Solve: $2(x - 3) + 5 = 3(x + 1) - 7$

Answer: _____

10. A rectangle has length 2 more than 3 times its width. If perimeter = 36, find the width.

Answer: _____

Answer Key

Algebra: Multi-Step — Hard

1. $x = 14$

Cross multiply: $2(x+4)=3(x-2)$. $2x+8=3x-6$. $14=x$.

2. $x = 15$

$6x-15-4x-4=11$. $2x-19=11$. $2x=30$. $x=15$.

3. $x > 6$

$2x > 12$. $x > 6$.

4. $x = 10/3$

$3-2x-4=-5x+9$. $-1-2x=-5x+9$. $3x=10$. $x=10/3$.

5. $x = 5$

$3x-2x+8=5x-12$. $x+8=5x-12$. $20=4x$. $x=5$.

6. $x = 10/3$

$4x-4+2x=3x+6$. $6x-4=3x+6$. $3x=10$. $x=10/3$.

7. $x = 13$

Cross multiply: $6(x-1)=4(x+5)$. $6x-6=4x+20$. $2x=26$. $x=13$.

8. $x \leq 5$

Subtract 4: $3x \leq 15$. Divide by 3: $x \leq 5$.

9. $x = 3$

$2x-6+5=3x+3-7$. $2x-1=3x-4$. $3=x$.

10. $w = 4$

$L=3w+2$. $P=2(L+w)=2(4w+2)=36$. $4w+2=18$. $4w=16$. $w=4$.