

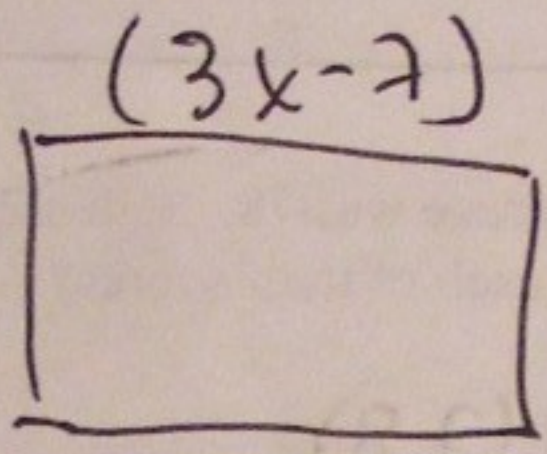
Please circle or box all answers. Show work. Credit will be offer for the work (80%) and the answer (20%).

Unit 1 Retake

Short Answer

1st step 5
2nd step 4
complete 12.5

1. The perimeter of a rectangle is 48 cm. The length can be represented by $(3x - 7)$ and the width can be represented by $(x + 3)$. What are the dimensions in centimeters of the rectangle?



$$\begin{aligned}
 8x - 8 &= 48 \\
 +8 &+8 \\
 8x &= 56 \\
 x &= 7
 \end{aligned}$$

10, 14

2. Solve the inequality $3x - 5y > 6$ for y .

$$\begin{aligned}
 -5y &> 6 - 3x \\
 \frac{-5y}{-5} & > \frac{6 - 3x}{-5}
 \end{aligned}$$

$y < \frac{3x}{5} - \frac{6}{5}$

3. If $y = \frac{3}{7}x + 2$, what is the value of x when $y = 8$?

$$\begin{aligned}
 8 &= \frac{3}{7}x + 2 \\
 \frac{-2}{\frac{7}{3}} & & \frac{-2}{\frac{7}{3}} \\
 \frac{7}{3} \cdot 6 &= \frac{7}{3} \cdot \frac{3}{7}x
 \end{aligned}$$

$x = 14$

4. What is the value of y when $x = 5$ for the inequality $5x + 3y \geq 79$?

$$\begin{aligned}
 5(5) + 3y &\geq 79 \\
 25 + 3y &\geq 79 \\
 \frac{-25}{3} & \frac{-25}{3} \\
 3y &\geq \frac{54}{3} \\
 \frac{3y}{3} &\geq 18 \\
 \mathbf{y} &\geq 18
 \end{aligned}$$

5. A family has 350 miles left to drive before they get to Dallas. The minimum speed limit is 45 mile per hour and the maximum speed limit is 75 miles per hour. Write an inequality for t the amount time it will take them to reach Dallas.

$$\frac{350}{75} \leq t \leq \frac{350}{45}$$

$$4.67 \text{ hr} \leq t \leq 7.78 \text{ hrs}$$

6. Drew, Seth and Logan finish a round of golf. Their average was 78. Seth score was 3 less than Drew's score and Logans was 5 more than Drew's score. What was each of their scores?

$$x + x - 3 + x + 5 = 3(78)$$

$$3x + 2 = 234$$

$$3x = 232$$

$$x = 77.3$$

$$\begin{array}{l} \text{Seth} = 74 \\ \text{Drew} = 77 \\ \text{Logan} = 82 \end{array}$$

7. What is the solution to $.5(8x - 4) = .25(22 - 4x)$?

$$4x - 2 = 5.5 - x$$

$$+x \quad +2 \quad +2 \quad +x$$

$$5x = 7.5$$

$$x = 1.5$$

8. What inequality describes all the solutions to $3(4 - x) < -2x + 6$?

$$12 - 3x < -2x + 6$$

$$-6 + 3x \quad +3x - 6$$

$$6 < x$$

$$x > 6$$