

Name: _____

Date: _____

1. At 5PM the temperature was -9.6 degrees. By midnight it decreased 3.5 degrees. What was the temperature at midnight?

$$\begin{array}{r}
 -9.6 - 3.5 \\
 -9.6 + -3.5
 \end{array}$$

-13.1

2. The $\sqrt{52}$ is between which two integers?

$$\sqrt{49} \quad \sqrt{64} \quad \boxed{7 \text{ and } 8}$$

3. Simplify $4x - 1 - (5x + 3)$

$$4x - 1 - 5x - 3$$

$$\boxed{-1x - 4}$$

4. The perimeter of a square is $48x + 12$ inches. Write an expression for one side of the square.

$$\boxed{12x + 3}$$

5. Evaluate $x - y$ if $x = -\frac{1}{2}$ and $y = -\frac{1}{5}$

$$-\frac{1}{2} - (-\frac{1}{5}) \rightarrow -\frac{1}{2} + \frac{1}{5} \rightarrow -\frac{5}{10} + \frac{2}{10} = \boxed{-\frac{3}{10}}$$

6. Simplify $-\frac{1}{2}(9x + 3)$

$$\boxed{-4.5x - 1.5}$$

7. Solve and check: $\frac{2}{5}x + 6 - \frac{1}{5}x = -12$

$$\frac{1}{5}x + \frac{6}{-6} = \frac{-12}{-6}$$

$$\frac{1}{5}x - \frac{1}{5}x = \frac{-18 \cdot 5}{1 \cdot 1}$$

$$\boxed{x = -90}$$

8. Simplify $0.10x - 0.15$ is subtracted from $3.5x + 1.1$

$$1(3.5x + 1.1) - 1(0.10x - 0.15)$$

$$3.5x + 1.1 - 0.10x + 0.15$$

$$\boxed{3.4x + 1.25}$$

9. Find three consecutive integers whose sum is 126.

| | | | |
|----|-------|-------|-----------|
| 41 | x | = 1st | con. int. |
| 42 | $x+1$ | = 2nd | con. int. |
| 43 | $x+2$ | = 3rd | con. int. |

$$x + x + 1 + x + 2 = 126$$

$$3x + 3 = 126$$

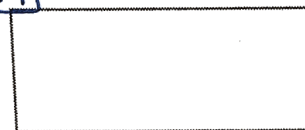
$$3x = 123$$

$$\boxed{x = 41}$$

10. Find the perimeter of a rectangle as a simplified expression

$$3x+2 + 3x+2 + 2 + 2$$

$$\boxed{6x + 8}$$



11. If the perimeter of the above rectangle was 50, write an equation to find x and solve.

$$6x + 8 = 50$$

$$\frac{6x + 8}{-8 \quad -8} = \frac{50 - 8}{-8}$$

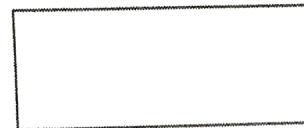
$$6x = 42$$

$$\rightarrow \boxed{x = 7}$$

12. Suppose a second rectangle has the dimensions below. Find the perimeter as a simplified expression.

$$5x-2 + 5x-2 + \frac{1}{2}x+2 + \frac{1}{2}x+2$$

$$\boxed{11x}$$



$$5x - 2$$

$$\frac{1}{2}x + 2$$