

Algebra II Chapter 1 Test Review

Order of operations

1) $7 - [4 + (6 \cdot 5)]$

$$\begin{aligned} &7 - [4 + 30] \\ &7 - [34] = \boxed{-27} \end{aligned}$$

2) $1 + 2 - 3 \cdot 4 \div 2$

$$\begin{aligned} &1 + 2 - 12 \div 2 \\ &1 + 2 - 6 = \boxed{-3} \end{aligned}$$

Solving linear Equations

1) $13 = 8 - 6x$

$$\begin{aligned} &-8 \quad -8 \\ &\frac{5}{-6} = \frac{-6x}{-6} \quad \boxed{x = -\frac{5}{6}} \end{aligned}$$

2) $4.5(x+1) - 2 = 4(x+3)$

$$4.5x + 4.5 - 2 = 4x + 12$$

$$\begin{aligned} &4.5x + 2.5 = 4x + 12 \\ &-4x \quad -4x \end{aligned}$$

$$\begin{aligned} &.5x + 2.5 = 12 \\ &-2.5 \quad -2.5 \end{aligned}$$

$$\begin{aligned} &.5x = 9.5 \\ &\frac{.5}{.5} \quad \frac{9.5}{.5} \end{aligned}$$

$$\boxed{x = 19}$$

Solving Absolute Value Problems

1) $\frac{|7p+4|}{8} = 3(8)$

$$|7p+4| = 24$$

$$\begin{aligned} &7p+4 = 24 \quad 7p=20 \\ &\text{or } -4 \quad -4 \quad \boxed{p = \frac{20}{7}} \end{aligned}$$

$$\begin{aligned} &7p+4 = -24 \\ &-4 \quad -4 \end{aligned}$$

$$\begin{aligned} &7p = -28 \\ &p = \frac{-28}{7} = \boxed{-4} \end{aligned}$$

2) $\frac{11|x-9|}{11} = \frac{121}{11}$

$$|x-9| = 11$$

$$\begin{aligned} &x-9 = 11 \\ &+9 \quad +9 \quad \boxed{x = 20} \end{aligned}$$

$$\begin{aligned} &\text{or} \\ &x-9 = -11 \\ &+9 \quad +9 \quad \boxed{x = -2} \end{aligned}$$