

Math 70 Quiz #4 Solutions

1. (a) $-10(-0.6) = 6$ since $10(0.6) = 6$. (Multiplying two negative numbers \rightarrow The result is positive.)

$$(b) \left(-\frac{1}{2}\right)^3 = \left(-\frac{1}{2}\right)\left(-\frac{1}{2}\right)\left(-\frac{1}{2}\right) = -\frac{(1)(1)(1)}{(2)(2)(2)} = -\frac{1}{8}$$

$$\begin{aligned}(c) \quad -2(5 - 1)^2 + 7(3) &= -2(4)^2 + 7(3) && \text{Operations inside parenthesis first} \\ &= -2(16) + 7(3) && \text{Exponents} \\ &= -32 + 21 && \text{Multiplication} \\ &= -11 && \text{Addition of } -32 \text{ and } 21\end{aligned}$$

$$\begin{aligned}2. \quad (a) \text{ Using distribution: } -5(2 + 3y) &= -5(2) + (-5)(3y) \\ &= -10 + (-15y) \quad \text{or} \quad -10 - 15y\end{aligned}$$

$$\begin{aligned}(b) \text{ Using distribution first and then combining like terms: } 2x(x - 10) - 4x &= 2x(x) - 2x(10) - 4x \\ &= 2x^2 - 20x - 4x \\ &= 2x^2 - 24x\end{aligned}$$

$$\begin{aligned}(c) \quad 7a + 3b - 1.6a + b &= 7a - 1.6a + 3b + b \\ &= 5.4a + 4b\end{aligned}$$

3. Difference in Elevation = $4421 - (-86) = 4421 + 86 = 4507$ meters

The difference between the elevation of Mount Whitney and Death Valley is 4,507 meters.