

Math 80 Quiz #1 Answers

1. (a) $\frac{3}{4} - \frac{1}{6} = \frac{9}{12} - \frac{2}{12} = \boxed{\frac{7}{12}}$

(b) $5 - 4(2 + 1)^2 = 5 - 4(3)^2$ (Order of Operations: PEMDAS)
 $= 5 - 4(9)$
 $= 5 - 36$
 $= \boxed{-31}$

2. (a) $\frac{x}{4} = 10 \Rightarrow \boxed{x = 40}$ (Multiply both sides by 10)

(b) $6t + 4 = 1 \Rightarrow 6t = -3$ (Subtracting 4 from each side)
 $\Rightarrow \boxed{t = -\frac{1}{2}}$ (Dividing both sides by 6)

(c) $9(x - 2) - 3 = 2x + 7 \Rightarrow 9x - 21 = 2x + 7$ (Distributing and simplifying)
 $\Rightarrow 7x - 21 = 7$ (Subtracting $2x$ from both sides)
 $\Rightarrow 7x = 28$ (Adding 21 to both sides)
 $\Rightarrow \boxed{x = 4}$ (Dividing both sides by 7)

(Note: You can do this problem differently, but you should end up with $x = 4$.)

3. **Unknowns:** Distance on Day One = x
Distance on Day Two = $2x$
Distance on Day Three = $x + 300$

Equation: Total Distance = 1300 $\Rightarrow x + 2x + x + 300 = 1300$

$$\Rightarrow 4x + 300 = 1300 \Rightarrow x = 250$$

Solution: Bob drove 250 miles on day one, 500 miles on day two, and 550 miles on day three.