

Math 70
Exam 1 Answers

1. (a) $\frac{5}{8} - \frac{3}{8} = \frac{2}{8} = \boxed{\frac{1}{4}}$

(b) $3\frac{1}{2} + \frac{2}{3} = \frac{7}{2} + \frac{2}{3} = \frac{21}{6} + \frac{4}{6} = \boxed{\frac{25}{6} \text{ or } 4\frac{1}{6}}$

(c) $5 + (-9) = \boxed{-4}$

(d) $12 - (-9) = 12 + 9 = \boxed{21}$

(e) $-2.1 - 3.57 = \boxed{-5.67}$

2. $325 \text{ mL} \times \frac{1 \text{ L}}{1000 \text{ mL}} = \frac{325}{1000} \text{ L} = \boxed{0.325 \text{ L}}$

3. $75 \text{ kg} \times \frac{2.2 \text{ lbs}}{1 \text{ kg}} = \frac{75(2.2)}{1} \text{ lbs} = \boxed{165 \text{ lbs}}$

4. (a) $-30 \div 6 = \boxed{-5}$

(b) $-\frac{12}{5} \left(\frac{3}{4}\right) = -\frac{36}{20} = \boxed{-\frac{9}{5} \text{ or } -1\frac{4}{5}}$

(c) $(-3)^4 = (-3)(-3)(-3)(-3) = \boxed{81}$

(d) $\frac{\frac{1}{2}}{\frac{3}{10}} = \frac{1}{2} \cdot \frac{10}{3} = \frac{10}{6} = \boxed{\frac{5}{3} \text{ or } 1\frac{2}{3}}$

(e) $(-2.4)(-1.7) = \boxed{4.08}$

(f) $8 - 5(6 - 3)^2 = 8 - 5(3)^2 = 8 - 5(9) = 8 - 45 = \boxed{-37}$

(g) $0.8 \div \left(\frac{4}{5}\right) = \frac{8}{10} \cdot \frac{5}{4} = \frac{40}{40} = \boxed{1}$

(Note: There are several other ways to go about this problem.)

5. (a) \$600 out of \$2000 is dedicated to rent $\Rightarrow \frac{600}{2000} = \frac{3}{10} = 0.3 = \boxed{30\%}$

(b) Amount to invest = 15% of \$2000 = $0.15(2000) = \boxed{\$300}$

(c) Amount of increase = $\frac{1}{3}$ rd of \$600 = $\frac{1}{3}(600) = \$200$

New rent price = $600 + 200 = \boxed{\$800}$

6. (a) $a - 2ab + 7a + 2ab = \boxed{8a}$
(Note: $a + 7a = 8a$, $-2ab + 2ab = 0$)

(b) $14x + 21x^2 - 5x^2 - 7 = \boxed{14x + 16x^2 - 7}$