

Unit 3 Quiz Review

1) $-\frac{7}{12} - \frac{3}{12}$

$$\begin{aligned} -7 - 3 &= -10 \\ \frac{-10}{12} \div 2 &= \boxed{\frac{-5}{6}} \end{aligned}$$

2) $2\frac{1}{3} - \frac{7}{8}$

$$\begin{aligned} 8 \cdot \frac{7}{3} - \frac{7 \cdot 3}{8 \cdot 3} &= \frac{56}{24} - \frac{21}{24} = \boxed{\frac{35}{24}} \end{aligned}$$

3) $(-3\frac{4}{5}) + 4\frac{2}{3}$

$$\begin{aligned} \frac{3 \cdot 19}{3 \cdot 5} + \frac{14 \cdot 5}{3 \cdot 5} &= \frac{-57}{15} + \frac{70}{15} = \boxed{\frac{13}{15}} \end{aligned}$$

4) $-\frac{11}{12} \cdot -\frac{2}{3}$

$$\begin{aligned} \frac{11 \cdot 2}{12 \cdot 3} &= \frac{22}{36} \div 2 = \boxed{\frac{11}{18}} \end{aligned}$$

5) $-\frac{7}{15} \div \frac{3}{5}$

$$\begin{aligned} -\frac{7}{15} \cdot \frac{5}{3} &= \frac{-35}{45} \div 5 = \boxed{\frac{-7}{9}} \end{aligned}$$

6) $4\frac{3}{4} \div 3\frac{3}{8}$

$$\begin{aligned} \frac{19}{4} \div \frac{27}{8} &= \frac{19}{4} \cdot \frac{8}{27} = \boxed{\frac{38}{27}} \end{aligned}$$

- 7) A cookie recipe calls for $2\frac{1}{4}$ cups of flour. If Ms. Hall triples the recipe, how much flour will she need?

$$\begin{aligned} 2\frac{1}{4} \cdot 3 &= \frac{9}{4} \cdot \frac{3}{1} = \boxed{\frac{27}{4} \text{ c.}} \\ &\text{or } 6\frac{3}{4} \end{aligned}$$

- 8) Ms. Pint ran two 10k races last year. Her first time was $58\frac{5}{8}$ minutes. Her second time was $57\frac{3}{4}$ minutes. How much faster was she on the second race?

A $1\frac{1}{2}$ minutes

☒ C $\frac{7}{8}$ minute

B $1\frac{1}{8}$ minutes

D $1\frac{1}{4}$ minutes

$$\begin{aligned} 58\frac{5}{8} - 57\frac{3}{4} &= \frac{469}{8} - \frac{231 \cdot 2}{4 \cdot 2} \\ &= \frac{469}{8} - \frac{462}{8} = \boxed{\frac{7}{8} \text{ min}} \end{aligned}$$

For questions 9-10, evaluate if $x = 3\frac{1}{2}$ and $y = -\frac{5}{6}$

9) $x - y$

$$\begin{aligned} 3\frac{1}{2} - -\frac{5}{6} &= 3\frac{7}{6} - -\frac{5}{6} \\ \frac{21}{6} + \frac{5}{6} &= \frac{26}{6} \div 2 = \boxed{\frac{13}{2}} \end{aligned}$$

10) $x \div y$

$$\begin{aligned} 3\frac{1}{2} \div -\frac{5}{6} &= \frac{7}{2} \div -\frac{5}{6} \\ \frac{7}{2} \cdot \frac{-6}{5} &= \frac{-42}{10} \div 2 \\ &= \boxed{\frac{-21}{5}} \end{aligned}$$