

ANSWER KEY 1.4

- 1) Two numbers are reciprocals or multiplicative inverse if the product of the numbers is one
- 2) The Least Common Denominator is the number that each denominator has as a common denominator
- 3) $\frac{a}{c} - \frac{b}{c} = \frac{a-b}{c}$ when $c \neq 0$

4) False (find common denominator, add numerator)

5) False $\left(\frac{2}{3} \cdot \frac{5}{3} = \frac{10}{9}\right)$

6) False $\left(\frac{2}{3} \cdot \frac{3}{2} = \frac{6}{6} = 1\right)$

9) $\frac{14}{21} = \frac{7 \cdot 2}{7 \cdot 3} = \frac{2}{3}$

17) $\frac{-15}{25} = \frac{-3 \cdot 5}{5 \cdot 5} = \frac{-3}{5}$

19) $\frac{150}{225} = \frac{2 \cdot 75}{3 \cdot 75} = \frac{2}{3}$

33) $\frac{3}{5} \cdot \frac{5}{3} = 1$

35) $-5 \cdot -\frac{1}{5} = 1$

93) $-\frac{5}{6} + \frac{7}{15}$
 $\frac{-25}{30} + \frac{14}{30}$
 $\frac{-11}{30}$

96) $\left(\frac{24}{5}\right)\left(\frac{-35}{4}\right)$
 $\left(\frac{6 \cdot 4}{5}\right)\left(\frac{-7 \cdot 5}{4}\right)$
 -42

99) $-\frac{5}{12} + \frac{2}{12}$
 $\frac{-3}{12} = \frac{-1}{4}$

102) $-\frac{3}{4} - \frac{1}{5}$
 $\left(\frac{-15}{20}\right) + \left(\frac{-4}{20}\right)$
 $\frac{-19}{20}$

105) $\frac{1}{12} + \left(\frac{-5}{28}\right)$
 $\frac{7}{84} + \left(\frac{-15}{84}\right)$
 $\frac{-8}{84} = \frac{-2 \cdot 4}{21 \cdot 4} = \frac{-2}{21}$

12: 3 2 2
 28: 2 2 7
 3 2 2 7 = 84

$$108) (34.2)(-8.43)$$

$$\begin{array}{r} 34.2 \\ \times 8.43 \\ \hline \end{array}$$

$$1026$$

$$13680$$

$$273600$$

$$= 288.306$$

$$\boxed{288.306}$$

$$111) -27 \div \frac{9}{5}$$

$$-27 \left(\frac{5}{9} \right)$$

$$\boxed{-15}$$

1.4 cont

$$114) 4.75 - 6.2$$

$$\begin{array}{r} 4.75 \\ - 6.20 \\ \hline \end{array}$$

$$-1.45$$

$$\boxed{-1.45}$$

$$117) \frac{12}{7} - \frac{17}{14} - \frac{48}{21}$$

$$\frac{72}{42} + \frac{-51}{42} + \frac{-96}{42}$$

$$72 - 51 - 96$$

$$-75$$

$$\frac{-75}{42} = \frac{-25 \cdot 3}{14 \cdot 3} = \frac{-25}{14}$$

$$\boxed{\frac{-25}{14}}$$

$$7 = 7$$

$$14 = 7 \cdot 2$$

$$21 = 7 \cdot 3$$

$$7 \cdot 2 \cdot 3 = 42$$

$$= 42$$

$$119) 54.2 - 18.78 - (-2.5) + 20.47$$

$$\begin{array}{r} 54.20 \\ - 18.78 \\ \hline \end{array} \quad \begin{array}{r} 35.42 \\ + 2.50 \\ \hline \end{array} \quad \begin{array}{r} 37.92 \\ + 20.47 \\ \hline \end{array}$$

$$35.42 + 37.92 + 20.47$$

$$\boxed{58.39}$$

$$121) 400 \times 25.8 \times 0.003$$

$$400 \times 25.8 = 10320$$

$$\text{easier } \rightarrow 400 \times 0.003 = 1.2$$

$$10320 \cdot 1.2 = \boxed{12384}$$

$$123) -\frac{11}{12} - \left(-\frac{1}{6} \right) + \frac{7}{8}$$

$$-\frac{22}{24} + \frac{4}{24} + \frac{21}{24}$$

$$-\frac{18}{24} + \frac{21}{24}$$

$$\frac{3}{24} = \frac{1}{8}$$

$$\boxed{\frac{1}{8}}$$

$$\begin{array}{l} 12 = 2 \cdot 2 \cdot 3 \\ 6 = 2 \cdot 3 \\ 8 = 2 \cdot 2 \cdot 2 \end{array} \quad \begin{array}{l} 2 \cdot 2 \cdot 3 \cdot 2 \\ = 24 \end{array}$$