

HW: PRACTICE FRACTION EQUATIONS

NAME: Key

1. $(\frac{4}{5}w + \frac{3}{5} = 2w)5$

$$\begin{array}{r} 4w + 3 = 10w \\ -4w \quad -4w \\ \hline 3 = 6w \\ \frac{3}{6} = \frac{6w}{6} \end{array} \quad \boxed{w = \frac{1}{2}}$$

2. $(-\frac{1}{12}m + \frac{1}{3} = \frac{1}{4}m)12$

$$\begin{array}{r} -1m + 4 = 3m \\ +1m \quad +1m \\ \hline 4 = 4m \\ \frac{4}{4} = \frac{4m}{4} \end{array} \quad \boxed{m = 1}$$

3. $(\frac{4}{5}g + \frac{5}{8}g = 7)40$

$$\begin{array}{r} 32g + -25g = 280 \\ 7g = 280 \\ \frac{7g}{7} = \frac{280}{7} \\ g = 40 \end{array} \quad \boxed{g = 40}$$

4. $(\frac{5}{8} + \frac{7}{16}q = \frac{3}{4} + \frac{1}{4}q)16$

$$\begin{array}{r} 10 + 7q = 12 + 4q \\ 4q \quad -4q \\ \hline 10 + 3q = 12 - 6 \\ -10 \quad -10 \\ \hline 3q = 2 \\ \frac{3q}{3} = \frac{2}{3} \end{array} \quad \boxed{q = \frac{2}{3}}$$

5. $(\frac{2}{7}x + \frac{1}{10} = 1 - x)70$

$$\begin{array}{r} 20x + 7 = 70 - 70x \\ +70x \quad +70x \\ \hline 90x + 7 = 70 \\ -7 \quad -7 \\ \hline 90x = 63 \\ \frac{90x}{90} = \frac{63}{90} \\ x = \frac{63}{90} = \frac{7}{10} \end{array} \quad \boxed{x = \frac{63}{90} = \frac{7}{10} \text{ reduce!}}$$

6. $(-\frac{1}{8}w + \frac{2}{5} = \frac{1}{8}w + \frac{3}{5})40$

$$\begin{array}{r} -5w + -16 = 5w + 24 \\ +5w \quad +5w \\ \hline -16 = 10w + 24 \\ -24 \quad -24 \\ \hline -40 = 10w \\ \frac{-40}{10} = \frac{10w}{10} \end{array} \quad \boxed{w = -4}$$

7. $(\frac{1}{4}a + \frac{4}{9} = \frac{7}{9} + \frac{5}{6}a)36$

$$\begin{array}{r} 9a + -16 = 28 + -30a \\ +30a \quad +30a \\ \hline 39a + -16 = 28 + -30a \\ +16 \quad +16 \\ \hline 39a = 44 \\ \frac{39a}{39} = \frac{44}{39} \end{array} \quad \boxed{a = \frac{44}{39} \text{ or } \frac{5}{39}}$$

8. $(\frac{5}{9} + \frac{5}{12}d = \frac{11}{12} + \frac{7}{9}d)36$

$$\begin{array}{r} 20 + 15d = 33 + 28d \\ -15d \quad -15d \\ \hline 20 = 33 + 13d \\ -33 \quad -33 \\ \hline -13 = 13d \\ \frac{-13}{13} = \frac{13d}{13} \end{array} \quad \boxed{d = -1}$$

9. $\frac{6-2b}{4} = 5.4$

$$\begin{array}{r} 6 - 2b = 20 \\ -6 \quad -6 \\ \hline -2b = 14 \\ \frac{-2b}{-2} = \frac{14}{-2} \end{array} \quad \boxed{b = -7}$$

10. $\frac{4-3y}{4} = -17.4$

$$\begin{array}{r} 4 - 3y = -68 \\ -4 \quad -4 \\ \hline -3y = -72 \\ \frac{-3y}{-3} = \frac{-72}{-3} \end{array} \quad \boxed{y = 24}$$