

Practice B: Solving Equations by Clearing Fractions

Name: _____

$$1) \left(\frac{1 \cdot 2}{8} a + \frac{10}{10} = \frac{3}{10} \right) 10$$

$$\begin{array}{r} 2a + 10 = 3 \\ -10 \quad -10 \\ \hline 2a = -7 \\ \frac{2a}{2} = \frac{-7}{2} \end{array}$$

$$a = \frac{-7}{2}$$

$$2) \left(\frac{2 \cdot 6}{8} a = \frac{3 \cdot 1}{2} \right) 6$$

$$\begin{array}{r} 4 - 6a = 3 \\ -4 \quad -4 \\ \hline -6a = -1 \\ \frac{-6a}{-6} = \frac{-1}{-6} \end{array}$$

$$a = \frac{1}{6}$$

$$3) \left(\frac{2 \cdot 2}{8} y - \frac{10}{10} + \frac{6}{10} y \right) 10$$

$$\begin{array}{r} 4y - 10 = 6y \\ -4y \quad -4y \\ \hline -10 = 2y \end{array}$$

$$-5 = y$$

$$4) 3\frac{1}{7}x = 2$$

$$7 \left(\frac{22}{7} x = 2 \right)$$

$$\begin{array}{r} 22x = 14 \\ \frac{22x}{22} = \frac{14}{22} \end{array}$$

$$x = \frac{7}{11}$$

$$5) \frac{y}{4} - y = \frac{7}{10} - \frac{3}{10}$$

$$\left(\frac{y^5 \cdot 20}{4} - y = \frac{4}{10} \right) 20$$

$$\begin{array}{r} 5y - 20y = 8 \\ -15y = 8 \\ \frac{-15y}{-15} = \frac{8}{-15} \end{array}$$

$$y = \frac{8}{-15}$$

$$6) \left(\frac{5 \cdot 3}{6} r - \frac{r \cdot 2}{2} - \frac{1 \cdot 6}{3} = \frac{13}{18} r \right) 18$$

$$15 - 2r - 6 = 13r$$

$$\begin{array}{r} 9 - 2r = 13r \\ +2r \quad +2r \\ \hline 9 = 15r \end{array}$$

$$\frac{9}{15} = \frac{15r}{15}$$

$$r = \frac{3}{5}$$

$$7) -2\frac{1}{7}x = \frac{20}{21}$$

$$\left(\frac{15 \cdot 3}{7} x = \frac{20}{21} \right) 21$$

$$\begin{array}{r} -45x = 20 \\ \frac{-45x}{-45} = \frac{20}{-45} \end{array}$$

$$x = \frac{-4}{9}$$

$$8) \left(\frac{3}{10} = 4x - \frac{1}{5} - 2x \right)$$

$$\left(\frac{3}{10} = 2x - \frac{1}{5} \right) 10$$

$$\begin{array}{r} 3 = 20x - 2 \\ +2 \quad +2 \\ \hline 5 = 20x \end{array}$$

$$\frac{5}{20} = \frac{20x}{20}$$

$$x = \frac{1}{4}$$

$$9) \left(\frac{2}{5}(m-3) = \left(2 + \frac{3}{5}m \right) \cdot 5 \right)$$

$$\left(\frac{2}{5}m - \frac{6}{5} = 2 + \frac{3}{5}m \right) 5$$

$$\begin{array}{r} 2m - 6 = 10 + 3m \\ -2m \quad -2m \\ \hline -6 = 10 + m \\ -10 \quad -10 \\ \hline -16 = m \end{array}$$

$$10) \left(\frac{3 \cdot 3}{2}(k-3) = \frac{2}{3}(2k+1) \right) 6$$

$$9(k-3) = 4(2k+1)$$

$$9k - 27 = 8k + 4$$

$$\begin{array}{r} -8k \quad -8k \\ \hline k - 27 = 4 \\ +27 \quad +27 \\ \hline k = 31 \end{array}$$

$$k = 31$$