

pg. 105-106 # 10, 17, 22, 25, 26, 28, 33, 37, 45

$$\begin{array}{r} 10) \quad 5x - 1 = x + 15 \\ \quad -x \quad -x \\ \hline 4x - 1 = 15 \\ \quad +1 \quad +1 \\ \hline 4x = 16 \\ \quad \quad \quad 4 \quad 4 \\ \hline \boxed{x = 4} \end{array}$$

$$\begin{array}{r} 17) \quad -3c - 12 = -5 + c \\ \quad \quad -c \quad -c \\ \hline -4c - 12 = -5 \\ \quad \quad +12 \quad +12 \\ \hline -4c = 7 \\ \quad \quad -4 \quad -4 \\ \hline \boxed{c = -\frac{7}{4}} \end{array}$$

$$\begin{array}{r} 22) \quad 8 - (3 + b) = b - 9 \\ \quad 8 - (3 + b) = b - 9 \\ \quad 8 - 3 - b = b - 9 \\ \quad 5 - b = b - 9 \\ \quad \quad -b \quad -b \\ \hline 5 - 2b = -9 \\ \quad -5 \quad -5 \\ \hline -2b = -14 \\ \quad -2 \quad -2 \\ \hline \boxed{b = 7} \end{array}$$

$$\begin{array}{r} 25) \quad 2r - (5 - r) = 13 + 2r \\ \quad 2r - 5 + r = 13 + 2r \\ \quad 3r - 5 = 13 + 2r \\ \quad \quad -2r \quad -2r \\ \hline r - 5 = 13 \\ \quad \quad +5 \quad +5 \\ \hline \boxed{r = 18} \end{array}$$

$$\begin{array}{r} 26) \quad 5g + 4(-5 + 3g) = 1 - g \\ \quad 5g - 20 + 12g = 1 - g \\ \quad 17g - 20 = 1 - g \\ \quad \quad +g \quad +g \\ \hline 18g - 20 = 1 \\ \quad \quad +20 \quad +20 \\ \hline 18g = 21 \\ \quad \quad 18 \quad 18 \\ \hline g = \frac{21}{18} \div 3 = \boxed{\frac{7}{6}} \end{array}$$

$$\begin{array}{r} 28) \quad 5y + 2 = \frac{1}{2}(10y + 4) \\ \quad 5y + 2 = 5y + 2 \\ \quad \quad \quad \text{Identity Equation} \\ \hline \boxed{\text{Infinitely many solutions}} \end{array}$$

$$33) 3.2 - 4d = 2.3d + 3$$

$$\begin{array}{r|l} -2.3d & -2.3d \\ \hline 3.2 - 6.3d & = 3 \end{array}$$

$$\begin{array}{r|l} -3.2 & -3.2 \\ \hline -6.3d & = -0.2 \end{array}$$

$$\begin{array}{r|l} -6.3 & -6.3 \\ \hline d & = \frac{-0.2}{-6.3} \end{array}$$

$$\boxed{d = \frac{2}{63}}$$

$$\frac{-2}{10} \div -6 \frac{3}{10}$$

$$\frac{-2}{10} \div \frac{63}{10} = \frac{-2}{10} \cdot \frac{10}{63} = \frac{20}{630} = \frac{2}{63}$$

$$37) \frac{1}{2}h + \frac{1}{3}(h-6) = \frac{5}{6}h + 2$$

$$6 \left( \frac{1}{2}h + \frac{1}{3}h - 2 \right) = \left( \frac{5}{6}h + 2 \right) 6 \quad \text{multiply by LCD}$$

$$3h + 2h - 12 = 5h + 12$$

$$5h - 12 = 5h + 12$$

$$\begin{array}{r} -5h \\ \hline -12 \neq 12 \end{array}$$

$\boxed{\text{No Solution}}$

$$45) 50 + 65x = 90 + 45x$$

$$\begin{array}{r|l} -45x & -45x \\ \hline 50 + 20x & = 90 \end{array}$$

$$\begin{array}{r|l} -50 & -50 \\ \hline 20x & = 40 \end{array}$$

$$\begin{array}{r|l} 20 & 20 \\ \hline x & = 2 \end{array}$$

$$\boxed{x = 2 \text{ months}}$$