

# Assign #3

New

Book: pg 31. #11, 13, 15, 19, 21, 23, 33, 35, 37, 41, 43, 47

sdve:

$$11. -2(a+4) = 2$$

$$\begin{array}{r} -2a - 8 = 2 \\ +8 \quad +8 \end{array}$$

$$\begin{array}{r} -2a = 10 \\ -2 \quad -2 \end{array}$$

$$\boxed{a = -5}$$

$$13. 7 + 5n = -58$$

$$\begin{array}{r} -7 \quad -7 \\ \hline 5n = -65 \end{array}$$

$$\begin{array}{r} 5n = -65 \\ \hline 5 \quad 5 \quad 5 \end{array}$$

$$\boxed{n = -13}$$

$$15. -\frac{2}{3}k = 14$$

$$\begin{array}{r} -\frac{2}{3} \quad -\frac{2}{3} \\ \hline k = -21 \end{array}$$

$$\boxed{k = -21}$$

$$k = \frac{14}{-\frac{2}{3}} = -21$$

19. fourteen decreased by the square of a number

$$\boxed{14 - x^2}$$

21. four times the sum of a number and its square

$$4(x + x^2)$$

23. the sum of 7 and three times a number

$$\boxed{7 + 3x}$$

33, 35, 37, 41, 43, 47

$$33. \quad \begin{array}{r} 34 - 10w = 6w + 2 \\ -2 + 10w \quad +10w \quad -2 \end{array}$$

$$\frac{32}{16} = \frac{16w}{16}$$

$$\boxed{w=2}$$

$$35. \quad \frac{1}{8} - \frac{3}{4}x = \frac{1}{16}$$
$$\frac{-1}{8} \qquad \qquad \frac{-1}{8}$$

$$-\frac{3}{4}x = \frac{1}{16} - \frac{2}{16}$$

$$\frac{-3}{4}x = \frac{-1}{16}$$
$$\frac{-3}{4} \quad \frac{-3}{4}$$

$$x = \frac{-1}{16} \cdot \frac{4}{3}$$

$$\boxed{x = \frac{1}{12}}$$

$$37. \quad 5 = -5(y+3)$$

$$\begin{array}{r} 5 = -5y - 15 \\ +15 \qquad \qquad +15 \end{array}$$

$$\frac{20}{-5} = \frac{-5y}{-5}$$

$$\boxed{y = -4}$$

$$41. \quad \begin{array}{r} 4m - 9 = 5m + 7 \\ -4m \quad -7 \quad -4m \quad -7 \end{array}$$

$$\boxed{-16 = m}$$

# Assign # 3 cont

$$43. \quad \begin{array}{r} 12x - 24 = -14x + 28 \\ +14x \quad +24 \quad +14x \quad +24 \end{array}$$

$$\frac{26x}{26} = \frac{52}{26}$$

$$\boxed{x = 2}$$

$$47. \quad \begin{array}{r} \frac{5}{7}x - 4 = \frac{3}{7}x + 1 \\ -\frac{3}{7}x \quad +4 \quad -\frac{3}{7}x \quad +4 \end{array}$$

$$\frac{\frac{2}{7}x}{\frac{2}{7}} = \frac{5}{\frac{2}{7}}$$

$$x = \frac{5}{1} \cdot \frac{7}{2}$$

$$\boxed{x = \frac{35}{2}}$$

Book: pg 47 # 9, 13, 15, 21, 27, 29, 35, 39

Solve & graph

$$9. \quad \begin{array}{r} \frac{d}{10} - 2 \leq 0 \\ +2 \quad +2 \end{array}$$

$$10 \left( \frac{d}{10} \right) \leq (2) 10$$

$$\boxed{d \leq 20} \quad \leftarrow \text{Number line from 0 to 20 with a closed circle at 20 and a ray pointing left}$$

13. A number plus 15 is greater than or equal to 27.

$$\begin{array}{r} x + 15 \geq 27 \\ -15 \quad -15 \end{array}$$

$$\boxed{x \geq 12} \quad \leftarrow \text{Number line from 0 to 12 with a closed circle at 12 and a ray pointing right}$$

15, 21, 27, 29, 35, 39

$$15. \quad \begin{array}{r} -5r > 25 \\ \hline -5 & -5 \end{array}$$

$$r < -5 \quad \leftarrow \begin{array}{c} \text{---} \\ 0 \quad 5 \end{array} \rightarrow$$

$$21. \quad \begin{array}{r} 8x + 5 \geq 10 \\ \hline -5 & -5 \end{array}$$

$$\frac{8x}{8} \geq \frac{5}{8}$$

$$x \geq \frac{5}{8} \quad \leftarrow \begin{array}{c} \text{---} \\ 0 \quad \frac{5}{8} \end{array} \rightarrow$$

$$27. \quad 2(m-5) - 3(2m-5) < 5m+1$$

$$2m-10 - 6m+15 < 5m+1$$

$$\begin{array}{r} -4m + 5 < 5m + 1 \\ +4m \quad -1 \quad +4m \quad -1 \end{array}$$

$$\frac{4}{9} < \frac{9m}{9}$$

$$m > \frac{4}{9} \quad \leftarrow \begin{array}{c} \text{---} \\ 0 \quad \frac{4}{9} \end{array} \rightarrow$$

$$29. \quad 3b - 2(b-5) < 2(b+4)$$

$$3b - 2b + 10 < 2b + 8$$

$$\begin{array}{r} b + 10 < 2b + 8 \\ -b \quad -8 \quad -b \quad -8 \end{array}$$

$$2 < b$$

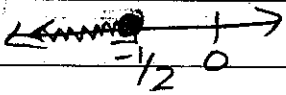
$$b > 2 \quad \leftarrow \begin{array}{c} \text{---} \\ 0 \quad 2 \end{array} \rightarrow$$

Assign #3 cont.

$$35. \quad (-x) \geq \left(\frac{x+4}{7}\right) \cdot 7$$

$$\frac{-7x}{-x} \geq \frac{x+4}{-x}$$

$$\frac{-8x}{-8} \geq \frac{4}{-8}$$

$$x \leq -\frac{1}{2}$$
A number line with a solid dot at -1/2 and an arrow pointing to the left. The number 0 is also marked on the line.


39. Three fourths of a number decreased by 25 is at least 8.

$$\frac{3}{4}x - 25 \geq 8$$

$$+25 \quad +25$$

$$\frac{\frac{3}{4}x}{\frac{3}{4}} \geq \frac{33}{\frac{3}{4}}$$

$$x \geq \frac{33 \cdot 4}{3}$$

$$x \geq 44$$
A number line with a solid dot at 44 and an arrow pointing to the right. The number 0 is also marked on the line.

Review

1.  $12.1 - 0.101 = \boxed{11.999}$

$$\begin{array}{r} 12.100 \\ -0.101 \\ \hline 11.999 \end{array}$$

$$2. -0.007 + 0.06 = \boxed{0.053}$$

$$\begin{array}{r} 0.0\bar{6} \\ -0.007 \\ \hline .053 \end{array}$$

$$3. (-5.34)(3.2) = \boxed{-17.088}$$

$$\begin{array}{r} 5.34 \\ \times 3.2 \\ \hline 1068 \\ + 16020 \\ \hline 17088 \end{array}$$

$$4. 2.92 \div 4 = \boxed{.73}$$

$$\begin{array}{r} .73 \\ 4 \overline{) 2.92} \\ \underline{-28} \\ 12 \\ \underline{-12} \\ 0 \end{array}$$

$$5. \left(1\frac{7}{9}\right)\left(5\frac{3}{4}\right) = \left(\frac{10}{9}\right)\left(\frac{23}{4}\right) = \boxed{\frac{92}{9}}$$

$$6. \left(\frac{-2}{1}\right)\left(\frac{5}{8}\right)\left(\frac{9}{10}\right) = \left(\frac{-10}{1}\right)\left(\frac{9}{10}\right) = \boxed{-9}$$

$$7. \frac{-7}{12} \div \frac{1}{18} = \frac{-7}{12} \cdot \frac{18}{1} = \boxed{\frac{-21}{2}}$$

$$8. 2\frac{4}{7} \div 1\frac{1}{2} = \frac{18}{7} \div \frac{3}{2} = \frac{18}{7} \cdot \frac{2}{3} = \boxed{\frac{12}{7}}$$

$$9. -\frac{3}{5} + \frac{5}{6} = -\frac{18}{30} + \frac{25}{30} = \boxed{\frac{7}{30}}$$

$$10. -\frac{7}{15} - \frac{5}{12} = -\frac{28}{60} - \frac{25}{60} = \boxed{-\frac{53}{60}}$$

$$11. \frac{7}{3} - \frac{5}{6} - \frac{2}{3} = \frac{14}{6} - \frac{5}{6} - \frac{4}{6} = \frac{9}{6} - \frac{4}{6} = \boxed{\frac{5}{6}}$$

Book pg 10: #20, 22, 30, 54

$$\begin{aligned} 20. & (7+5)3 - 3 \\ & = (12)3 - 3 \\ & = 36 - 3 \\ & = \boxed{33} \end{aligned}$$

$$\begin{aligned} 22. & 10 + 16 \div 4 + 8 \\ & = 10 + 4 + 8 \\ & = 14 + 8 \\ & = \boxed{22} \end{aligned}$$

$$\begin{aligned} 30. & -3(2^2 + 3) \\ & = -3(4 + 3) \\ & = -3(7) \\ & = \boxed{-21} \end{aligned}$$

54. Insert grouping symbols as needed to make each statement true.

$$a.) (1+3) \cdot 2^2 = 16$$

$$b.) [1+(3 \cdot 2)]^2 = 49$$

$$c.) 1+3 \cdot 2^2 = 13$$

$$d.) 1+(3 \cdot 2)^2 = 37$$

pg 17) Book pg 16: # 20-26 evens, 52, 54

$$20. 2.9 + 3.7 = \boxed{6.6; \mathbb{R}, \mathbb{Q}}$$

$$\begin{array}{r} 2.9 \\ +3.7 \\ \hline 6.6 \end{array}$$

$$22. 58 \div 100 = \boxed{.58; \mathbb{R}, \mathbb{Q}}$$

$$24. 1-5 = \boxed{-4; \mathbb{R}, \mathbb{Q}, \mathbb{Z}}$$

$$26. 3^3 + 2^2 = 27 + 4 = \boxed{31; \mathbb{R}, \mathbb{Q}, \mathbb{Z}, \mathbb{W}, \mathbb{N}}$$

$$52. 6x - 2y - 3x + 2y = \boxed{3x}$$

$$54. \frac{1}{2}(17-4x) - \frac{3}{4}\left(\frac{1}{2} - \frac{16}{1}x\right) \\ = \frac{17}{2} - 2x - \frac{9}{2} + 12x = 10x + \frac{8}{2} = \boxed{10x + 4}$$