

Pg 211 #49-60, 47, 48, 64, 65

$$\begin{aligned} 49. \quad |2d| + 3 &= 21 \\ |2d| + 3 - 3 &= 21 - 3 \\ |2d| &= 18 \\ 2d &= \pm 18 \\ \frac{2d}{2} &= \frac{\pm 18}{2} \text{ or } \frac{2d}{2} = \frac{18}{2} \\ \boxed{d = -9 \text{ or } d = 9} \end{aligned}$$

$$\begin{aligned} 50. \quad 1.2 |5p| &= 3.6 \\ \frac{1.2}{1.2} \quad \frac{1.2}{1.2} \quad & \quad \quad \\ |5p| &= 3 \\ 5p &= \pm 3 \\ \frac{5p}{5} &= \frac{-3}{5} \quad \frac{5p}{5} = \frac{3}{5} \\ \boxed{p = -\frac{3}{5} \quad p = \frac{3}{5}} \end{aligned}$$

$$\begin{aligned} 51. \quad |d + \frac{1}{2}| + \frac{3}{4} &= 0 \\ |d + \frac{1}{2}| + \frac{3}{4} - \frac{3}{4} &= 0 - \frac{3}{4} \\ |d + \frac{1}{2}| &= -\frac{3}{4} \\ \boxed{\text{no solution}} \\ \text{Absolute Value } \neq & \text{ a} \\ \text{negative } \# & \end{aligned}$$

$$\begin{aligned} 52. \quad |f| - \frac{2}{3} &= \frac{5}{6} \\ |f| - \frac{2}{3} + \frac{2}{3} &= \frac{5}{6} + \frac{2}{3} \cdot \frac{2}{2} \\ |f| &= \frac{5}{6} + \frac{4}{6} \\ |f| &= \frac{9}{6} \\ f &= \pm \frac{9}{6} \\ \boxed{f = \pm \frac{3}{2}} \end{aligned}$$

$$\begin{aligned} 53. \quad 3|5y - 7| - 6 &= 24 \\ 3|5y - 7| - 6 + 6 &= 24 + 6 \\ 3|5y - 7| &= \frac{30}{3} \\ |5y - 7| &= 10 \\ 5y - 7 &= \pm 10 \end{aligned}$$

$$\begin{aligned} 5y - 7 &= -10 & 5y - 7 &= 10 \\ 5y - 7 + 7 &= -10 + 7 & 5y - 7 + 7 &= 10 + 7 \\ 5y &= -3 & 5y &= 17 \\ \frac{5y}{5} &= \frac{-3}{5} & \frac{5y}{5} &= \frac{17}{5} \\ y &= -\frac{3}{5} & y &= \frac{17}{5} \\ \boxed{y = -6 \quad y = 3.4} \end{aligned}$$

$$\begin{aligned} 54. \quad |t| + 2.7 &= 4.5 \\ |t| + 2.7 - 2.7 &= 4.5 - 2.7 \\ |t| &= 1.8 \\ \boxed{t = \pm 1.8} \end{aligned}$$

$$\begin{aligned} 55. \quad -2|c - 4| &= -8.4 \\ \frac{-2}{-2} \quad \frac{-2}{-2} & \quad \quad \\ |c - 4| &= 4.2 \\ c - 4 &= \pm 4.2 \\ c - 4 &= 4.2 \\ c - 4 + 4 &= 4.2 + 4 \\ \boxed{c = 8.2} \end{aligned}$$

$$\begin{aligned} c - 4 &= -4.2 \\ c - 4 + 4 &= -4.2 + 4 \\ \boxed{c = -.2} \end{aligned}$$

$$56. \frac{|y|}{-3} = 5$$

$$\frac{-3|y|}{-3} = \frac{5}{-3}$$

$$|y| = -\frac{5}{3}$$

No solutions

57)

$$|n| - \frac{5}{4} < 5$$

less than

$$|n| - \frac{5}{4} + \frac{5}{4} < 5 + \frac{5}{4}$$

$$|n| < \frac{20}{4} + \frac{5}{4}$$

$$\pm |n| < \frac{25}{4}$$

$$\pm n < \frac{25}{4}$$

$$n < \frac{25}{4}$$

$$n > -\frac{25}{4}$$

$$-\frac{25}{4} < n < \frac{25}{4} = 6\frac{1}{4}$$

and

$$58. \frac{7}{8} < |c+7|$$

greater

$$\frac{7}{8} < \pm |c+7|$$

$$-7 + \frac{7}{8} < c + 7 - 7 \quad \frac{7}{8} < c - 7$$

$$-\frac{56}{8} + \frac{7}{8} < c \quad +\frac{56}{8} + \frac{7}{8} < c - c$$

$$-\frac{49}{8} < c$$

$$\frac{63}{8} < -c$$

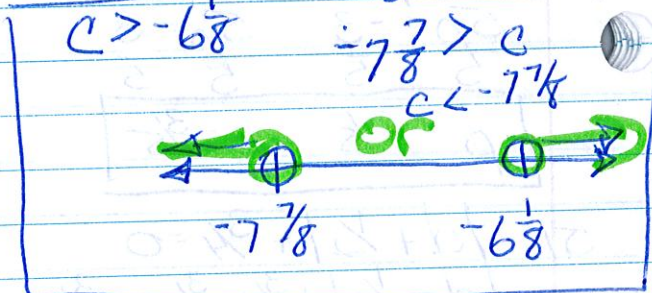
$$-6\frac{1}{8} < c$$

$$-\frac{63}{8} > \frac{(-1)c}{(1)}$$

$$c > -6\frac{1}{8}$$

$$-7\frac{7}{8} > c$$

$$c < -7\frac{7}{8}$$



59.

$$59. 4 - 3|m+2| > -14$$

$$4 - 4 - 3|m+2| > -14 - 4$$

$$-3|m+2| > -18$$

$$\pm \overset{-3}{|m+2|} < \overset{-3}{6} \text{ Less than } 28.5 < x < 29$$

TWO EQUATIONS

$$m+2 < 6 \quad -m-2 < 6$$

$$m+2-2 < 6-2 \quad -m-2+2 < 6+2$$

$$m < 4$$

$$-m < 8$$

$$(-1)m < 8 (-1)$$

$$(-1)$$

$$m > -8$$



$$60. | -3d | \geq 6.3 \text{ greater}$$

$$\pm | -3d | \geq 6.3$$

$$+3d \geq 6.3 \quad -3d \geq 6.3$$

$$3$$

$$3$$

$$-3$$

$$-3$$

$$d \geq 2.1 \quad d \leq -2.1$$

or

$$47.) \text{ ideal length } 90 \text{ cm} \\ \text{vary } \pm .05$$

$$90 - .05 < x < 90 + .05$$

$$89.95 < x < 90.05$$

$$48.) \text{ ideal } 28.75 \\ \text{vary } \pm .25$$

$$28.75 - .25 < x < 28.75 + .25$$

$$28.5 < x < 29$$

64) No solution
BECAUSE ABSOLUTE
VALUE CANNOT
BE A NEGATIVE
NUMBER.

LESS THAN

$$65.) |y+7| \leq 1$$

SOLUTION

$$\pm |y+7| \leq 1$$

$$y+7 \leq 1$$

$$y+7-7 < 1-7$$

$$y < -6$$

$$-y-7 \leq 1$$

$$-y-7+7 \leq 1+7$$

$$-y \leq 8$$

$$(-1) \quad (-1)$$

$$y \geq -8$$

$$-8 \leq y \leq -6$$

AND