

Textbook Problems

pg 230 # 7, 9, 15, 25, 27

pg. 231 # 43, 46-48

$$7) \quad \begin{array}{ccc} 2 < 3n - 4 \leq 14 \\ +4 \quad \quad +4 \quad \quad +4 \end{array}$$

$$\frac{6}{3} < \frac{3n}{3} \leq \frac{18}{3}$$

$$\boxed{2 < n \leq 6}$$

$(2, 6]$



$$9) \quad \begin{array}{ccc} -2 < -3x + 7 < 4 \\ -7 \quad \quad -7 \quad -7 \end{array}$$

$$\frac{-9}{-3} < \frac{-3x}{-3} < \frac{-3}{-3}$$

$$\boxed{3 > x > 1}$$

$(1, 3)$



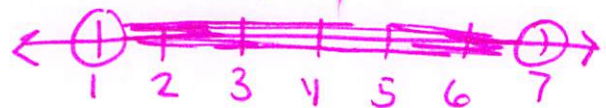
$$15) \quad 4 \cdot \frac{1}{2} < \frac{3x - 1}{4} \cdot 4 < 5 \cdot 4$$

$$\begin{array}{ccc} 2 < 3x - 1 < 20 \\ +1 \quad \quad +1 \quad +1 \end{array}$$

$$\frac{3}{3} < \frac{3x}{3} < \frac{21}{3}$$

$$\boxed{1 < x < 7}$$

$(1, 7)$



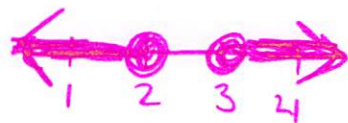
$$25) \quad \begin{array}{r} 7 - 3c \geq 1 \\ -7 \quad -7 \end{array} \quad \text{or} \quad \begin{array}{r} 5c + 2 \geq 17 \\ -2 \quad -2 \end{array}$$

$$\begin{array}{r} -3c \geq -6 \\ \frac{-3c}{-3} \geq \frac{-6}{-3} \end{array}$$

$$c \leq 2$$

$$\begin{array}{r} 5c \geq 15 \\ \frac{5c}{5} \geq \frac{15}{5} \end{array}$$

$$c \geq 3$$



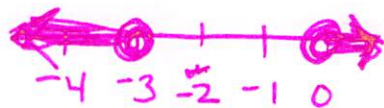
$$27) \quad \begin{array}{r} 2d + 5 \leq -1 \\ -5 \quad -5 \end{array} \quad \text{or} \quad \begin{array}{r} -2d + 5 \leq 5 \\ -5 \quad -5 \end{array}$$

$$\begin{array}{r} 2d \leq -6 \\ \frac{2d}{2} \leq \frac{-6}{2} \end{array}$$

$$d \leq -3$$

$$\begin{array}{r} -2d \leq 0 \\ \frac{-2d}{-2} \leq \frac{0}{-2} \end{array}$$

$$d \geq 0$$



43) See Geometry Example

If x is longest side

$$12 + 18 > x \quad \text{AND}$$

$$30 > x$$

If 18 is longest side

$$\begin{array}{r} 12 + x > 18 \\ -12 \quad -12 \end{array}$$

$$x > 6$$

$$\begin{array}{r} 6 < x < 30 \\ \text{ft} \quad \quad \quad \text{ft} \end{array}$$

for the 3rd Side

$$46) 66 \leq C \leq 88$$

$$47) 15 \leq D \leq 30$$

48) Lowest and Highest Considering All Months

Charlotte: $29 \leq C \leq 90$

Detroit: $15 \leq D \leq 83$

$$55) 15 < \frac{1}{2}(x + x + 2 + x + 4) < 21$$

$$15 < \frac{1}{2}(3x + 6) < 21$$

$$15 < \frac{3}{2}x + 3 < 21$$

$$\frac{2}{3} \cdot 12 < \frac{2}{3} \cdot \frac{3}{2}x < 18 - \frac{2}{3}$$

$$8 < x < 12$$

Only Even Integer is 10
in this range.

Let $x = 1^{\text{st}}$ #
Let $x+2 = 2^{\text{nd}}$ #
Let $x+4 = 3^{\text{rd}}$ #

$$\begin{aligned} x &= 10 \\ x+2 &= 12 \\ x+4 &= 14 \end{aligned}$$