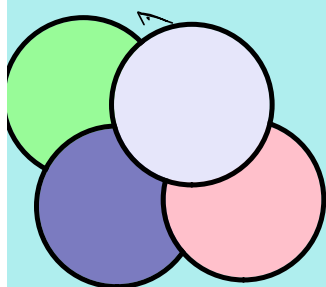


$$\textcircled{4} \quad \begin{aligned} 22 + 11.5w &= T \\ 218 - 13w &= T \end{aligned}$$

Homework

Questions



$$\begin{array}{r} 22 + 11.5w = 218 - 13w \\ \quad \quad \quad + 13w \qquad \quad \quad + 13w \\ \hline \end{array}$$

$$\begin{array}{r} 22 + 24.5w = 218 \\ - 22 \qquad \qquad \qquad - 22 \\ \hline 24.5w = 196 \\ \underline{24.5} \qquad \quad \underline{24.5} \end{array}$$

$$w = 8$$

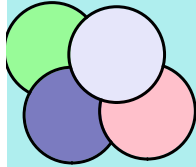
@ 8 weeks they will have the same amount of \$

$$\textcircled{18}$$

$$S + L = 20$$

A garden supply store sells two types of lawn mowers. Total sales of mowers for the year were \$8379.70. The total number of mowers sold were 30. The small mower costs \$249.99 and the large mower costs \$329.99. Find the number of each type of mower sold.

Homework Quiz



$$249.99x + 329.99y = 8379.7$$

$$x + y = 30$$

$$y = 30 - x$$

$$\frac{8379.7 - 249.99x}{329.99} = \frac{329.99y}{329.99}$$

$$25.394 - .758x = y$$

$$S = 30 - L$$

$$249.99s + 329.99L = 8,379.7$$

$$249.99(30 - L) + 329.99L = 8379.7$$

$$7499.7 - 249.99L + 329.99L =$$

$$7499.7 + 80L = 8379.7$$

$$-7499.7 \quad -7499.7$$

$$80L = 880$$

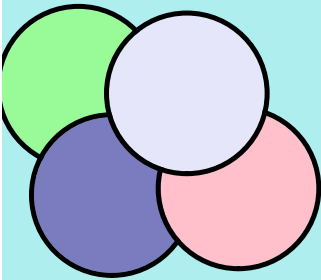
$$S = 30 - L$$

$$S = 30 - 11$$

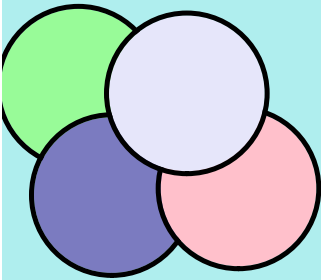
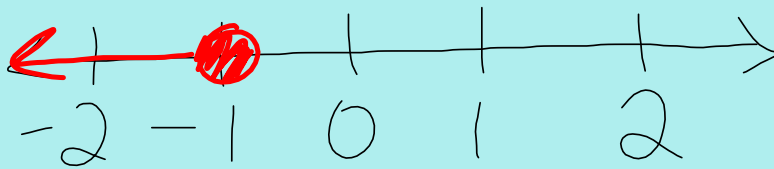
$$S = 19$$

$$L = 11$$

7.5 Linear Inequalities

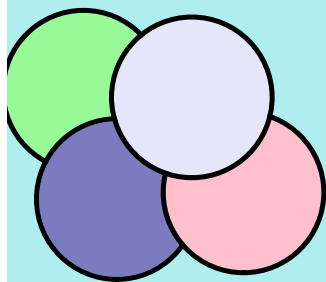


How do you graph $y \leq -1$?



Linear Inequality: describes a region of the coordinate plane that has a boundary line.

Solutions of an Inequality: the coordinates of the points that make the inequality true.



We use a Solid Line for the signs \leq and \geq

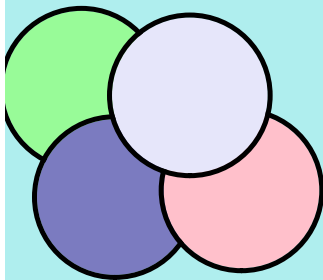


We use a Dashed Line for the signs $<$ and $>$



For the signs $<$ and \leq you shade below the line.

For the signs $>$ and \geq you shade above the line.



Example 1:

Is the point $(0, 1)$ a solution to $y > \frac{5}{3}x - 4$

yes $1 > \frac{5}{3}(0) - 4$

$$1 > -4$$

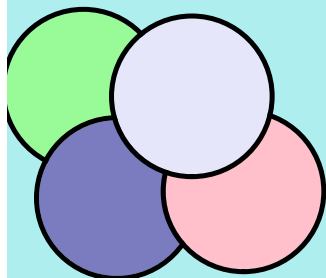
What about the point $(6, 2)$?

$$2 > \frac{5}{3}(6) - 4$$

$$2 > \frac{30}{3} - 4$$

$$2 > 10 - 4$$

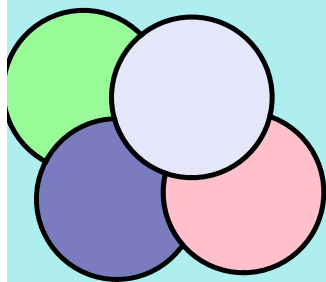
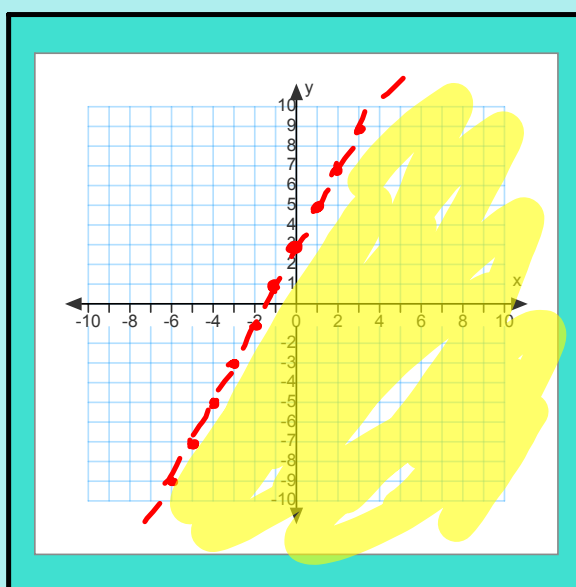
$$2 > 6 \text{ NO}$$



Example 2:

Graph $y < 2x + 3$

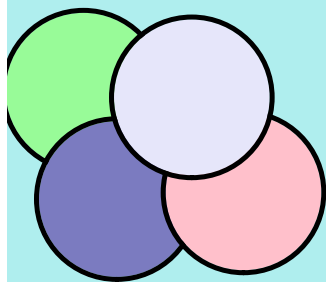
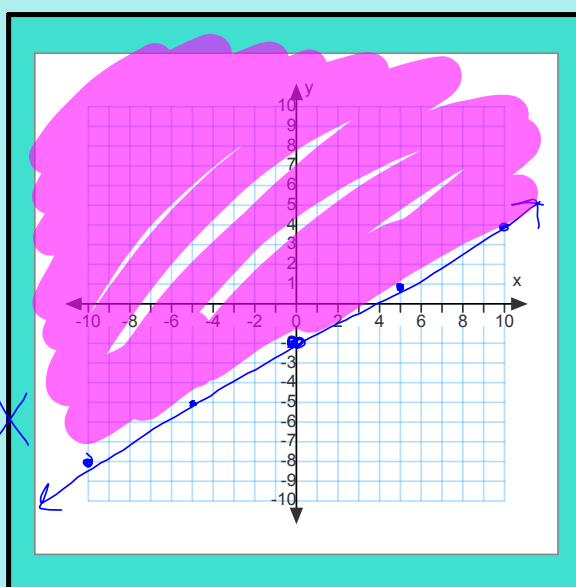
$$y = 2x + 3$$



Example 3:

Graph $3x - 5y \leq 10$

$$\begin{array}{r} -3x \quad -3x \\ \hline -5y \leq 10 - 3x \\ \hline -5 \quad -5 \quad -5 \\ y \geq -2 + \frac{3}{5}x \end{array}$$



Example 4:

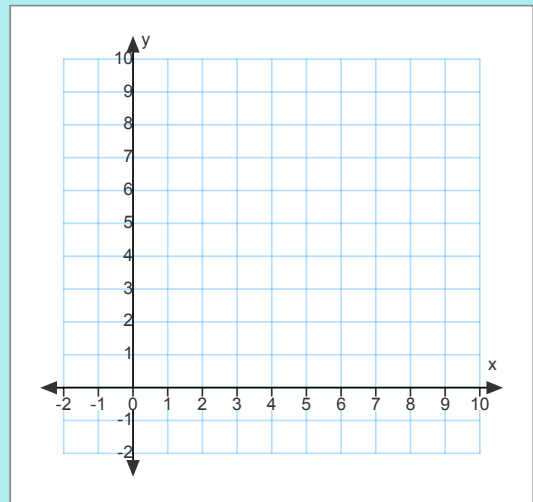
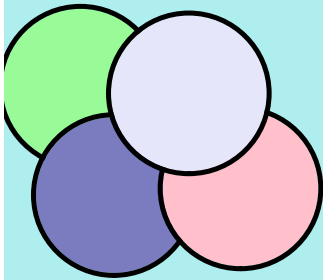
Suppose you plan on spending no more than \$24 on hamburgers and chicken wings for a party you are having. Hamburgers cost \$3.00/lb and chicken wings cost \$2.40/lb. Find three possible combinations of hamburgers and chicken wings you can buy.

$$24 \geq 3.00h + 2.40w$$

$$24 \geq 3.00x + 2.40y$$

$$24 - 3x \geq 2.4y$$

$$10 - \frac{5}{4}x \geq y$$



Pg 407 #1, 3, 4, 7-23 odd

Homework

