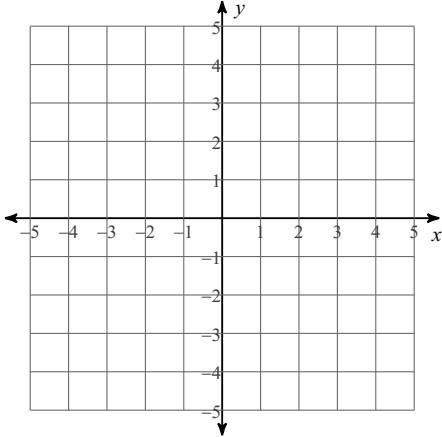


## SM3-A HW #12-3 (Review)

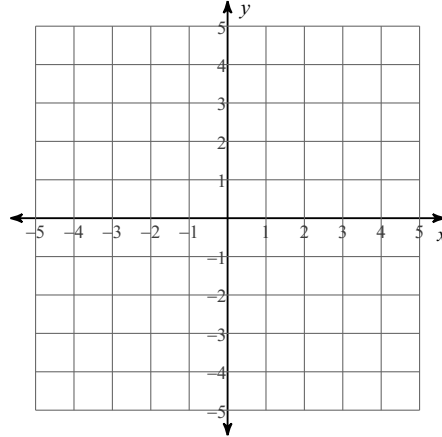
Date \_\_\_\_\_ Period \_\_\_\_\_

Sketch the solution to each system of inequalities.

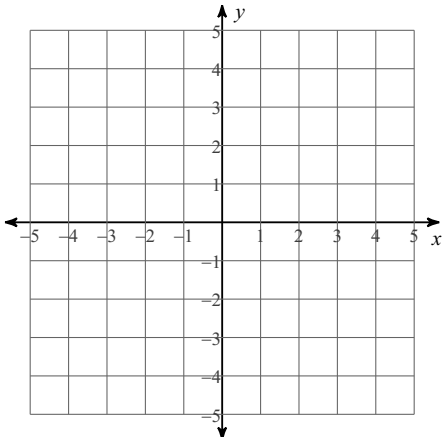
$$1) \begin{cases} y \geq -4x + 1 \\ y \leq -x - 2 \end{cases}$$



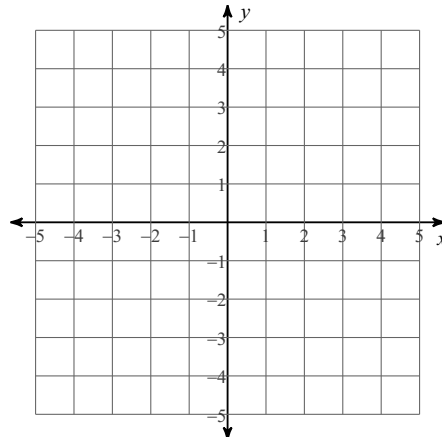
$$2) \begin{cases} y < 5x + 3 \\ y \geq x - 1 \end{cases}$$



$$3) \begin{cases} x + y \geq 1 \\ x - 3y < 9 \end{cases}$$



$$4) \begin{cases} 2x - y \leq -1 \\ x - 2y \leq 4 \end{cases}$$



5) Solve the system (either by elimination or substitution).

$$9x + 3y = -18$$

$$x - 2y = 19$$

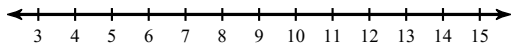
6) Solve the system (either by elimination or substitution).  $x + 7y = 10$ 

$$6x + 4y = -16$$

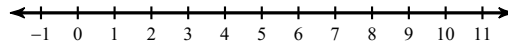
Write the solution to each compound inequality three different ways:

(1) simplified inequality, (2) graph, (3) interval notation.

7)  $x + 2 < 9$  or  $x - 4 > 6$



8)  $-10a \leq -40$  and  $a - 3 \leq 4$



9) A rectangle with a width of  $(2x + 2)$  feet and a length of  $(3x - 1)$  feet has an area of 200 square feet. What is the rectangle's width and length?

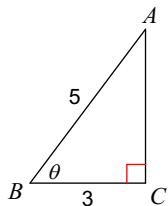
10) A rectangle with a width of  $(2x + 8)$  feet and a length of  $(3x - 5)$  feet, has an area of 150 square feet. What is the rectangle's width and length?

11) It takes Totsakan 11 hours to mop a warehouse. Cody can mop the same warehouse in 8 hours. Find how long it would take them if they worked together.

12) Working alone, Carlos can build a home in 15 weeks. Ryan can build the same home in 10 weeks. How long would it take them if they worked together?

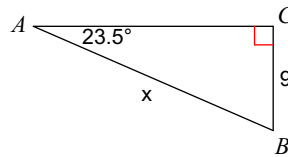
Find the measure of each angle indicated.  
Round to the nearest tenth.

13)



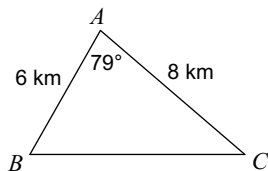
Find the measure of each side indicated.  
Round to the nearest tenth.

14)



Find the area of each triangle to the nearest tenth.

15)



16) A sphere has a radius of 3 feet. It has a mass of 5000 lbm. What is the density of the sphere? Round to the nearest 1/10th.

17) A cylinder has a radius of 6 feet and a height of 2 feet. It has a mass of 1500 lbm. What is the density of the cylinder? Round to the nearest 1/10th.