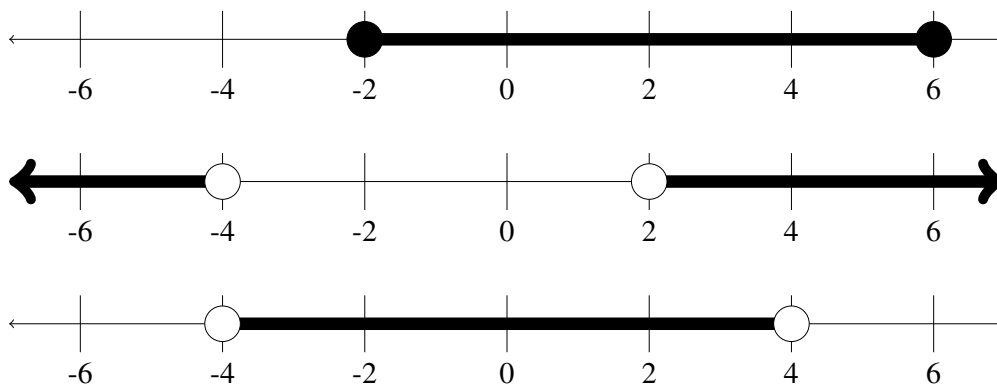


Absolute Values and Inequalities**(/40 points)**

Check and explain your solutions for full credit.

If you are not sure what is happening, graphing could be a good idea.

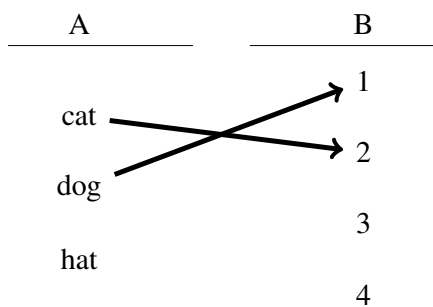
What is the solution set to the equation $|3x + 2| = x - 3$?What is the solution set to the inequality $|3x - 6| \geq -3$?What is the solution set to the inequality $-|5x - 15| \leq -20$?In the diagram below, I have graphed the solution sets according to 3 different inequalities involving **absolute values**. What are they?

Linear Functions**(/30 points)**Provide the equation of the line in **Slope-Intercept Form** that satisfies the following conditions:

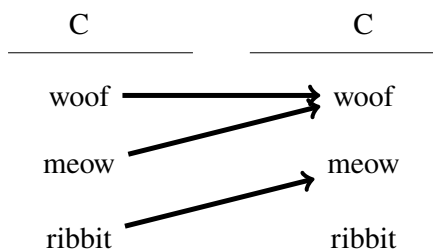
- Passes through the x-intercept at -4
- Is **parallel** to the line $6x + 3y = 9$

Provide the equation of the line in **Standard Form** that satisfies the following conditions:

- Goes through the point (2, 6)
- Is **perpendicular** to the line $y = 2x + 92$

Sets, Relations, and Functions**(/30 points)**Write the definition of **relation**.Write the definition of **function**.**The relation R from A to B .**Which one is the **domain**, A or B ?Which one is the **range**, A or B ?Write out the elements of R .Is R a function from A to B ? (**Yes / No**)

If not, explain why.

The relation S from C to C .What is $R(\text{hat})$?Is S a function from C to C ? (**Yes / No**)

If not, explain why.

What is $S(S(\text{ribbit}))$?