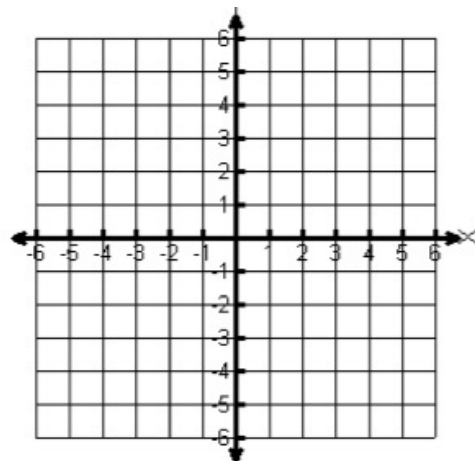


Graph and evaluate. Check solutions on Graphing Calculators

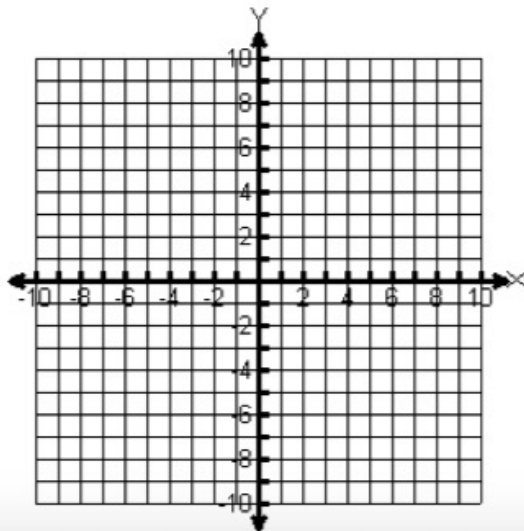
$$1. \quad f(x) = \begin{cases} 2x+3, & x < -1 \\ |x|-5, & -1 \leq x < 2 \\ 1, & x \geq 2 \end{cases}$$

evaluate: $f(1) = \underline{\hspace{2cm}}$
 $f(6) = \underline{\hspace{2cm}}$
 $f(0) = \underline{\hspace{2cm}}$



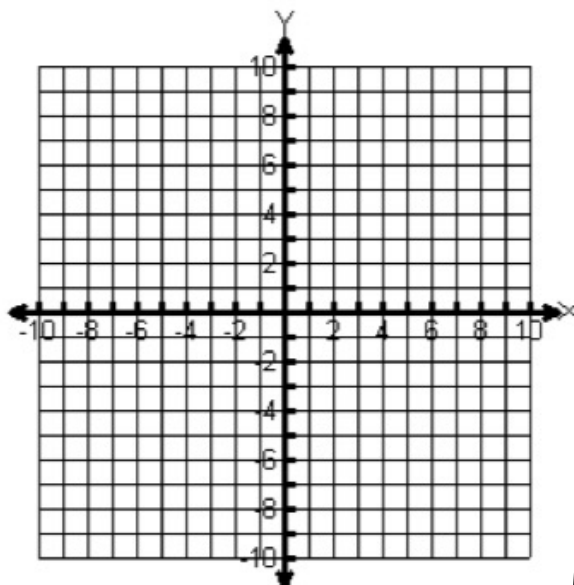
$$2. \quad f(x) = \begin{cases} -x, & -4 \leq x < -2 \\ x-3, & -2 \leq x < 1 \\ x^2-2, & x \geq 1 \end{cases}$$

evaluate: $f(-4) = \underline{\hspace{2cm}}$
 $f(-2) = \underline{\hspace{2cm}}$
 $f(1) = \underline{\hspace{2cm}}$

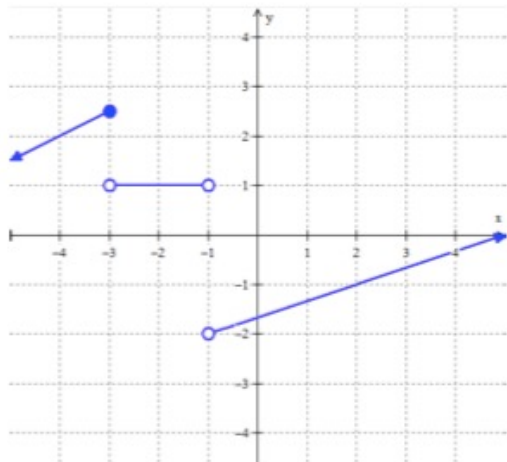


$$3. \quad f(x) = \begin{cases} 2, & x \geq 5 \\ -2x, & -2 \leq x < 3 \\ 2-x^2, & x < -2 \end{cases}$$

evaluate: $f(-2) = \underline{\hspace{2cm}}$
 $f(5) = \underline{\hspace{2cm}}$



Evaluate using the graphs provided

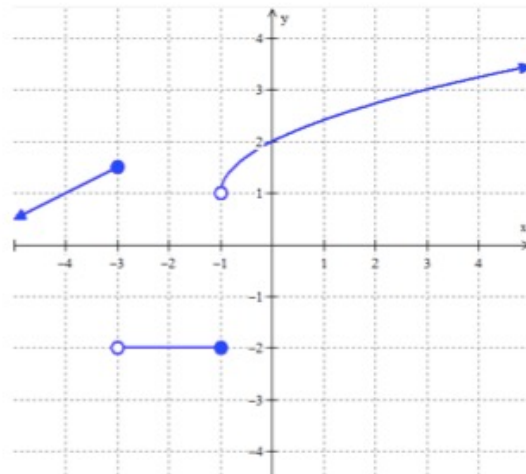


$$f(2) =$$

$$f(-3) =$$

$$f(-1) =$$

$$f(-4) =$$



$$f(0) =$$

$$f(-4) =$$

$$f(-1) =$$

$$f(3) =$$

5. Isaac lives 3 miles away from his school. School ended at 3 pm and Isaac began his walk home with his friend Tate who lives 1 mile away from the school, in the direction of Isaac's house. Isaac stayed at Tate's house for a while and then started home. On the way he stopped at the library. Then he hurried home. The graph at the right is a **piece-wise defined function** that shows Isaac's distance from home during the time it took him to arrive home.

- How much time passed between school ending and Isaac's arrival home?
- How long did Isaac stay at Tate's house?
- How far is the library from Isaac's house?
- Where was Isaac, 3 hours after school ended?
- Use function notation to write a mathematical expression that says the same thing as question d.
- When was Isaac walking the fastest? How fast was he walking?

