

Lesson 9-1 Match each situation to its corresponding graph. Sketch a possible graph of the situation if the situation does not match any of the given graphs.

Graph A

Graph B

Graph C

Graph D

1. A state senator's high approval rating is rising steadily but then drops sharply after a scandal.
2. The value of an antique chair increases steadily.
3. Sales of a valuable stock dip and then recover.
4. A scuba diver descends to 60 ft below sea level and swims around at that depth.

Jan 26-11:23 AM

Lesson 9-2 Create a table and a verbal description to represent each graph.

5. **Hat Prices**

6. **Swimming Pool Admission**

Jan 26-11:25 AM

Graph the function. Together!!!!

$$f(x) = \begin{cases} y=4 & \text{if } x \leq -1 \\ y=-2 & \text{if } x > -1 \end{cases}$$

The function is composed of two constant pieces that will be represented by two rays. Because the domain is divided by $x = -1$, evaluate both branches of the function at $x = -1$.

$f(-3) = 4$

$f(-1) = 4$

$f(4) = -2$

Jan 26-11:25 AM

Graph the function. Together!!!!

$$g(x) = \begin{cases} y = -3x & \text{if } x < 2 \\ y = x + 3 & \text{if } x \geq 2 \end{cases}$$

$g(-2) = 6$

$g(3) = 6$

$g(8) = 11$

Jan 29-2:56 PM

Together!!!

$$f(x) = \begin{cases} 2x+1 & x \geq 1 \\ x^2+3 & x < 1 \end{cases}$$

$f(-4) =$

$f(8) =$

$f(2) =$

Jan 29-11:05 AM

On Own!!!

Graph each function.

$$g(x) = \begin{cases} 2x-4 & x \leq 2 \\ -2x+2 & x > 2 \end{cases}$$

Jan 26-11:25 AM

Graph. **On Own!!!**

$$f(x) = \begin{cases} x^2 - 1 & x \leq 0 \\ 2x - 1 & 0 < x \leq 5 \\ 3 & x > 5 \end{cases}$$

Evaluate.

$f(-2) =$

$f(0) =$

$f(5) =$

Handwritten notes:
 $\begin{array}{c|c} X & Y \\ \hline 0 & -1 \\ -1 & 0 \\ -2 & 3 \end{array}$

Jan 29-2:56 PM

Write the equation for the piecewise function.

$$f(x) = \begin{cases} 4 & x \leq -1 \\ -2 & x > -1 \end{cases}$$

$$f(x) = \begin{cases} -3x & x \leq 2 \\ x+3 & x > 2 \end{cases}$$

Jan 29-1:58 PM

Write the equation for the piecewise function.

Jan 29-2:00 PM

Application Problem

A boat rental company charges \$25 per day for the first week. After that, the cost decreases to \$15 per day.

Write a piecewise function for the cost of renting a boat for x number of days.

$$f(x) = \begin{cases} 25x & x \leq 7 \\ 25 \cdot 7 + 15(x-7) & x > 7 \end{cases}$$

What is the cost of renting for 12 days?

$$175 + 15(12-7) = \boxed{\$250}$$

Jan 21-7:48 AM

The cost of renting a fishing boat is \$25 per hour for the first 7 hours and \$10 per hour for the next 10 hours, and \$5 per hour for any additional hours.

Identify the piecewise function for this situation, and find the cost of renting the boat for 30 hours.

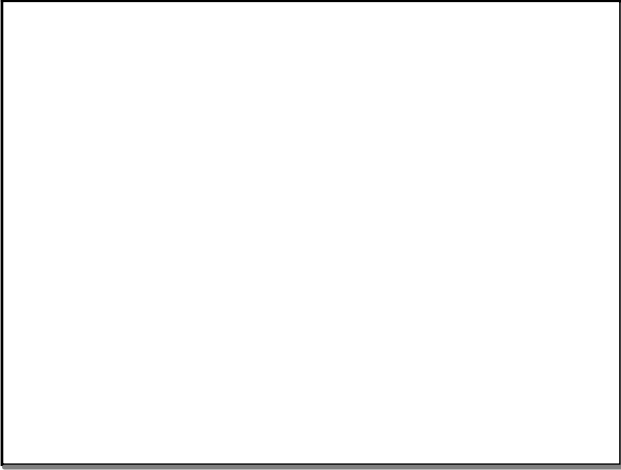
$$f(x) = \begin{cases} 25x & x \leq 7 \\ 25 \cdot 7 + 10(x-7) & 7 < x \leq 17 \\ 25 \cdot 7 + 10 \cdot 10 + 5(x-17) & x > 17 \end{cases}$$

$275 + 5(13) = \boxed{\$340}$

Jan 26-11:20 AM

Assignment: 9.2 Packet

Jan 26-11:26 AM



Jan 29-12:56 PM