

NAME:

DATE:

A2.Q1.BERMELLEEMBO:

FUNCTIONS

(DAY F3)

NOTES

#1. Consider the function $f(x) = \begin{cases} x+5 & \text{if } x \geq 0 \\ 2x+6 & \text{if } x < 0 \end{cases}$

Evaluate each A - F

A. $f(3)$

B. $f(8)$

C. $f(-7)$

D. $f(-4)$

E. $f(-2)$

F. $f(5)$

G. Find the “y-intercept”. Show the function notation that leads to this answer.

H. Is $x = -3$ a zero of the function? Show.

I. Is $x = -5$ a zero of the function? Show.

#2. Consider the function $g(x) = \begin{cases} x-1 & \text{if } x \geq -2 \\ -x-3 & \text{if } x < -2 \end{cases}$

Evaluate each A - F

A. $g(3)$

B. $g(8)$

C. $g(-7)$

D. $g(-1)$

E. $g(-2)$

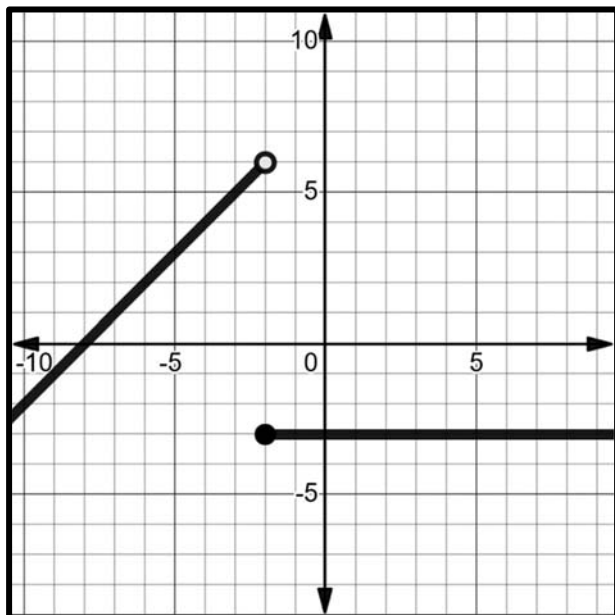
F. $g(-10)$

G. Find the “y-intercept”. Show the function notation that leads to this answer.

H. Is $x = 1$ a zero of the function? Show.

I. Is $x = -3$ a zero of the function? Show.

#3. Consider the graph of the function $y = f(x)$ shown below.



Evaluate each A - F

A. $f(3)$

B. $f(8)$

C. $f(-7)$

D. $f(-4)$

E. $f(-2)$

F. $f(5)$

G. Find the “y-intercept”. Show the function notation that leads to this answer.

H. Find the zero of the function. Show the function notation that leads to this answer.

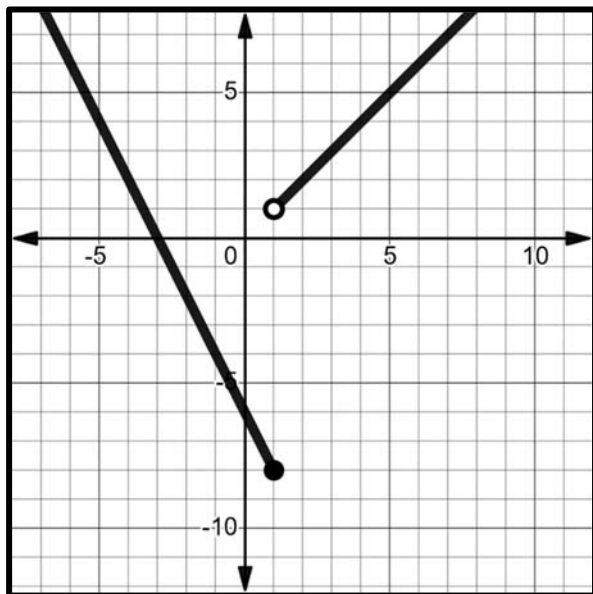
I. If $f(x) = 3$ what is the values of x ? Support with notation.

J. The function is decreasing on what interval?

K. The function is constant on what interval?

L. The function is increasing on what interval?

#4. Consider the graph of the function $y = g(x)$ shown below.



Evaluate each A - F

A. $g(3)$

B. $g(4)$

C. $g(-5)$

D. $g(-1)$

E. $g(1)$

F. $g(5)$

G. Find the “y-intercept”. Show the function notation that leads to this answer.

H. Find the zero of the function. Show the function notation that leads to this answer.

I. If $g(x) = 6$ what are the values of x ? Support with notation.

J. The function is decreasing on what interval?

K. The function is constant on what interval?

L. The function is increasing on what interval?