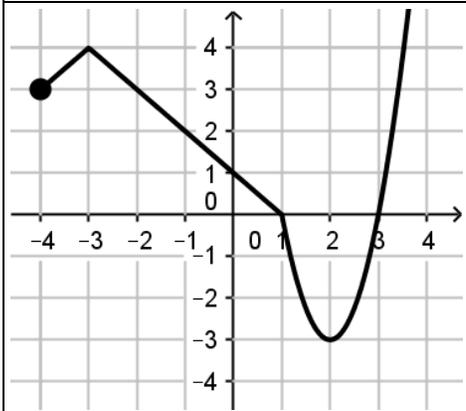


NAME:	PERIOD:	Round 1 A-Graph
-------	---------	----------------------------



Evaluate:

$f(-4) =$

$f(-3) =$

$f(-1) =$

$f(2) =$

Zeros:

y-intercept:

Domain:

Range:

Extrema:

Inc/Dec/Constant:

Continuity:

End Behavior:

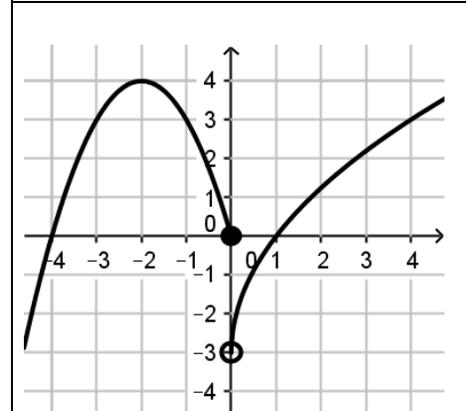
$x \rightarrow -4, y \rightarrow$

$x \rightarrow \infty, y \rightarrow$

Equation:

$$f(x) = \begin{cases} _ |x _ | _, _ \\ _ (x _)^2 _, _ \end{cases}$$

NAME:	PERIOD:	Round 1 B-Graph
-------	---------	----------------------------



Evaluate:

$f(-3) =$

$f(-2) =$

$f(-1) =$

$f(4) =$

Zeros:

y-intercept:

Domain:

Range:

Extrema:

Inc/Dec/Constant:

Continuity:

End Behavior:

$x \rightarrow -\infty, y \rightarrow$

$x \rightarrow \infty, y \rightarrow$

Equation:

$$f(x) = \begin{cases} _ (x _)^2 _, _ \\ _ \sqrt{x} _, _ \end{cases}$$

NAME:	PERIOD:	Round 1 A-Equation
-------	---------	-------------------------------

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

Work for finding zeros is shown. Circle the zeros and cross out any that are restricted from the domain.

y-intercept (show work):

$$0 = -|x+3|+4$$

$$|x+3| = 4$$

$$\begin{array}{l} \swarrow \quad \searrow \\ x+3=4 \quad x+3=-4 \\ x=1 \quad \quad x=-7 \end{array}$$

$$0 = 3(x-2)^2 - 3$$

$$\frac{3}{3} = \frac{3(x-2)^2}{3} - 3$$

$$\sqrt{1} = \sqrt{(x-2)^2}$$

$$\pm 1 = x-2$$

$$2 \pm 1 = x$$

$$\begin{array}{l} \swarrow \quad \searrow \\ x=3 \quad \quad x=1 \end{array}$$

Evaluate:

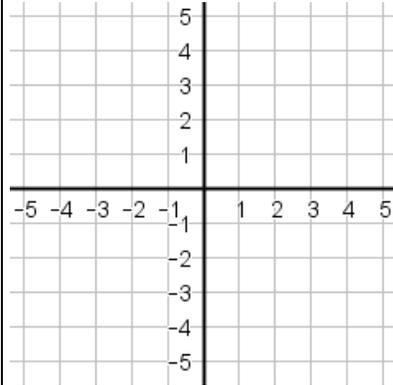
$f(-4) =$

$f(-3) =$

$f(-1) =$

$f(2) =$

Graph:



Domain:

Range:

Extrema:

Inc/Dec/Constant:

Continuity:

End Behavior:

$$x \rightarrow -4, y \rightarrow$$

$$x \rightarrow \infty, y \rightarrow$$

NAME:	PERIOD:	Round 1 B-Equation
-------	---------	-------------------------------

$$f(x) = \begin{cases} -(x+2)^2+4, & x \leq 0 \\ 3\sqrt{x}-3, & x > 0 \end{cases}$$

Work for finding zeros is shown. Circle the zeros and cross out any that are restricted from the domain.

y-intercept (show work):

$$0 = -(x+2)^2 + 4$$

$$\sqrt{(x+2)^2} = \sqrt{4}$$

$$x+2 = \pm 2$$

$$x = -2 \pm 2$$

$$\begin{array}{l} \swarrow \quad \searrow \\ x=0 \quad \quad x=-4 \end{array}$$

$$0 = 3\sqrt{x} - 3$$

$$\frac{3}{3} = \frac{3\sqrt{x}}{3}$$

$$(1)^2 = (\sqrt{x})^2$$

$$1 = x$$

Evaluate:

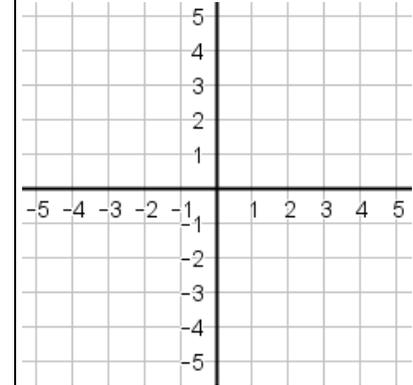
$f(-3) =$

$f(-2) =$

$f(-1) =$

$f(4) =$

Graph:



Domain:

Range:

Extrema:

Inc/Dec/Constant:

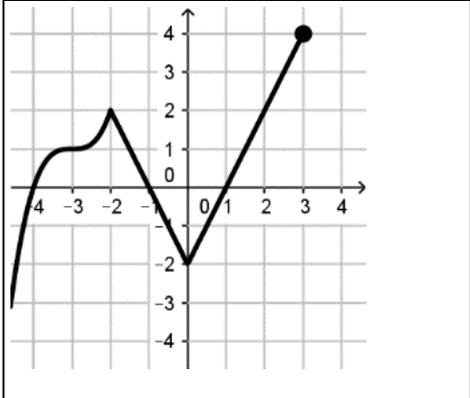
Continuity:

End Behavior:

$$x \rightarrow -\infty, y \rightarrow$$

$$x \rightarrow \infty, y \rightarrow$$

NAME:	PERIOD:	Round 1 C-Graph
-------	---------	----------------------------



Evaluate:

$f(-3) =$

$f(-2) =$

$f(2) =$

$f(3) =$

Zeros:

y-intercept:

Domain:

Range:

Extrema:

Inc/Dec/Constant:

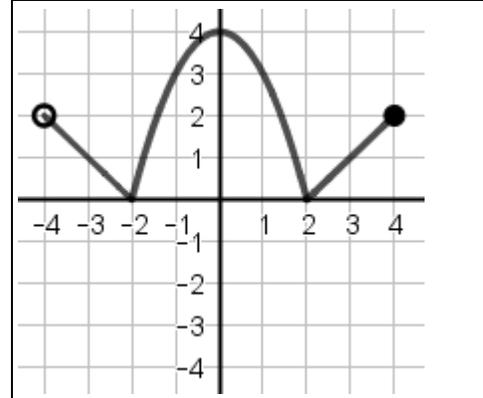
Continuity:

End Behavior:
 $x \rightarrow -\infty, y \rightarrow$
 $x \rightarrow 3, y \rightarrow$

Equation:

$$f(x) = \begin{cases} (x \underline{\hspace{1cm}})^3 \underline{\hspace{1cm}}, & \underline{\hspace{1cm}} \\ \underline{\hspace{1cm}} |x| \underline{\hspace{1cm}}, & \underline{\hspace{1cm}} \end{cases}$$

NAME:	PERIOD:	Round 2 D-Graph
-------	---------	----------------------------



Evaluate:

$f(-4) =$

$f(-3) =$

$f(1) =$

$f(3) =$

Zeros:

y-intercept:

Domain:

Range:

Extrema:

Inc/Dec/Constant:

Continuity:

End Behavior:
 $x \rightarrow -4, y \rightarrow$
 $x \rightarrow 4, y \rightarrow$

Equation:

$$f(x) = \begin{cases} \underline{\hspace{1cm}} x \underline{\hspace{1cm}}, & \underline{\hspace{1cm}} \\ \underline{\hspace{1cm}} x^2 \underline{\hspace{1cm}}, & \underline{\hspace{1cm}} \\ x \underline{\hspace{1cm}}, & \underline{\hspace{1cm}} \end{cases}$$

NAME:	PERIOD:	Round 1 C-Equation
-------	---------	-------------------------------------

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

Work for finding zeros is shown. Circle the zeros and cross out any that are restricted from the domain.

$$\begin{aligned} 0 &= (x+3)^3 + 1 & 0 &= 2|x| - 2 \\ \sqrt[3]{-1} &= \sqrt[3]{-(x+3)^3} & \frac{2}{2} &= \frac{2|x|}{2} \\ -1 &= x+3 & 1 &= |x| \\ x &= -4 & \swarrow & \searrow \\ & & x=1 & x=-1 \end{aligned}$$

y-intercept (show work):

Evaluate:

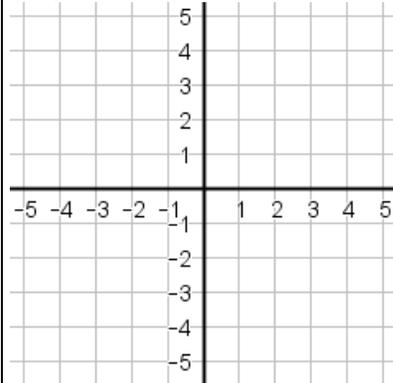
$f(-3) =$

$f(-2) =$

$f(2) =$

$f(3) =$

Graph:



Domain:

Range:

Extrema:

Inc/Dec/Constant:

Continuity:

End Behavior:

$$\begin{aligned} x &\rightarrow -\infty, y \rightarrow \\ x &\rightarrow 3, y \rightarrow \end{aligned}$$

NAME:	PERIOD:	Round 2 D-Equation
-------	---------	-------------------------------------

$$f(x) = \begin{cases} -x - 2, & -4 < x \leq -2 \\ -x^2 + 4, & -2 < x \leq 2 \\ x - 2, & 2 < x \leq 4 \end{cases}$$

Work for finding zeros is shown. Circle the zeros and cross out any that are restricted from the domain.

$$\begin{aligned} 0 &= -x - 2 & 0 &= -x^2 + 4 & 0 &= x - 2 \\ x &= -2 & \sqrt{x^2} &= \sqrt{4} & x &= 2 \\ & & x &= \pm 2 & & \\ & & \swarrow & \searrow & & \\ x &= 2 & x &= -2 & & \end{aligned}$$

y-intercept (show work):

Evaluate:

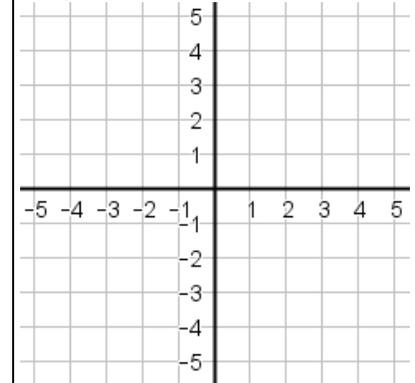
$f(-4) =$

$f(-3) =$

$f(1) =$

$f(3) =$

Graph:



Domain:

Range:

Extrema:

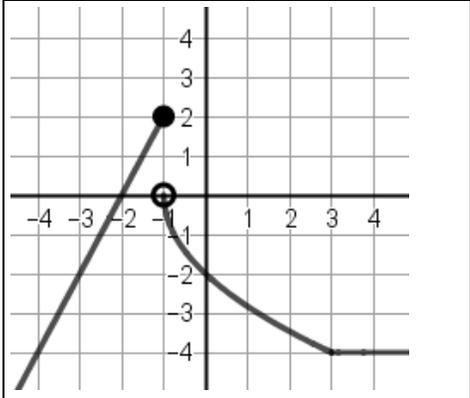
Inc/Dec/Constant:

Continuity:

End Behavior:

$$\begin{aligned} x &\rightarrow -4, y \rightarrow \\ x &\rightarrow 4, y \rightarrow \end{aligned}$$

NAME:	PERIOD:	Round 2 E-Graph
-------	---------	----------------------------



Evaluate:

$f(-4) =$

$f(-3) =$

$f(-1) =$

$f(3) =$

Zeros:

y-intercept:

Domain:

Range:

Extrema:

Inc/Dec/Constant:

Continuity:

End Behavior:

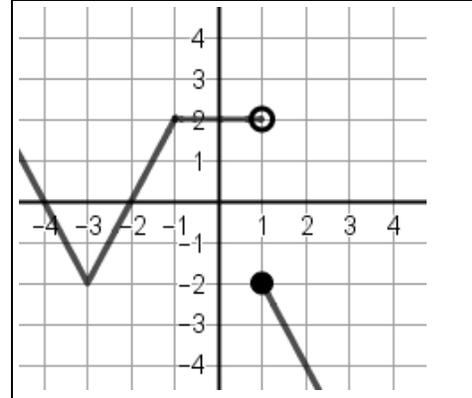
$x \rightarrow -\infty, y \rightarrow$

$x \rightarrow \infty, y =$

Equation:

$$f(x) = \begin{cases} \underline{\hspace{2cm}} & \underline{\hspace{2cm}} \\ \underline{\sqrt{x}} & \underline{\hspace{2cm}} \\ \underline{\hspace{2cm}} & \underline{\hspace{2cm}} \end{cases}$$

NAME:	PERIOD:	Round 2 F-Graph
-------	---------	----------------------------



Evaluate:

$f(-3) =$

$f(-1) =$

$f(1) =$

$f(2) =$

Zeros:

y-intercept:

Domain:

Range:

Extrema:

Inc/Dec/Constant:

Continuity:

End Behavior:

$x \rightarrow -\infty, y \rightarrow$

$x \rightarrow \infty, y \rightarrow$

Equation:

$$f(x) = \begin{cases} \underline{\hspace{2cm}} & \underline{\hspace{2cm}} \\ \underline{\hspace{2cm}} & \underline{\hspace{2cm}} \\ \underline{\hspace{2cm}} & \underline{\hspace{2cm}} \end{cases}$$

NAME:	PERIOD:	Round 2 E-Equation
-------	---------	-------------------------------

$$f(x) = \begin{cases} 2x + 4, & x \leq -1 \\ -2\sqrt{x+1}, & -1 \leq x \leq 3 \\ -4, & x > 3 \end{cases}$$

Work for finding zeros is shown. Circle the zeros and cross out any that are restricted from the domain.

y-intercept (show work):

$$0 = 2x + 4 \quad \frac{0}{-2} = \frac{-2\sqrt{x+1}}{-2} \quad 0 = -4$$

$$\frac{-4}{2} = \frac{2x}{2} \quad (0)^2 = (\sqrt{x+1})^2 \quad \text{False, so no zeros for the constant subfunction}$$

$$x = -2 \quad 0 = x + 1 \quad x = -1$$

Evaluate:

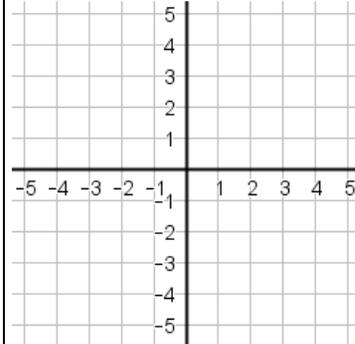
$f(-4) =$

$f(-3) =$

$f(-1) =$

$f(3) =$

Graph:



Domain:

Range:

Extrema:

Inc/Dec/Constant:

Continuity:

End Behavior:

$$x \rightarrow -\infty, y \rightarrow$$

$$x \rightarrow \infty, y \rightarrow$$

NAME:	PERIOD:	Round 2 F-Equation
-------	---------	-------------------------------

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

Work for finding zeros is shown. Circle the zeros and cross out any that are restricted from the domain.

y-intercept (show work):

$$0 = 2|x+3| - 2 \quad 0 = 2 \quad \frac{0}{-2} = \frac{-2x}{-2}$$

$$\frac{2}{2} = \frac{2|x+3|}{2} \quad \text{False, so no zeros for the constant subfunction}$$

$$1 = |x+3| \quad \begin{matrix} \swarrow & \searrow \\ 1 = x+3 & -1 = x+3 \\ x = -2 & x = -4 \end{matrix} \quad x = 0$$

Evaluate:

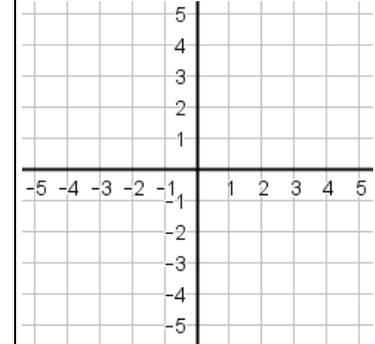
$f(-3) =$

$f(-1) =$

$f(1) =$

$f(2) =$

Graph:



Domain:

Range:

Extrema:

Inc/Dec/Constant:

Continuity:

End Behavior:

$$x \rightarrow -\infty, y \rightarrow$$

$$x \rightarrow \infty, y \rightarrow$$