

### 2.3 Practice Problems

Analyze each graph.

1.  $f(1.57)$

$f(0)$

$x$  if  $f(x) = -1$

Domain

Range

Zero(s)

Is it a function?

Intervals of Increasing

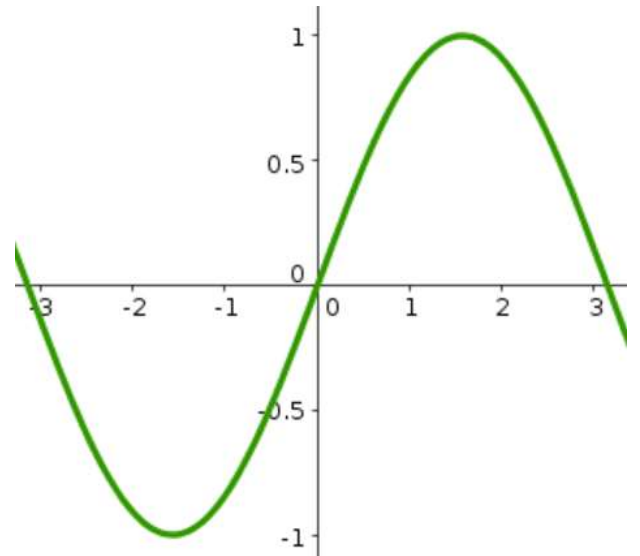
Intervals of Decreasing

Relative Minimum(s)

Relative Maximum(s)

Is it even or odd?

Is it one-to-one?



2.  $f(-1)$

$f(1)$

$x$  if  $f(x) = 4$

Domain

Range

Zero(s)

Is it a function?

Intervals of Increasing

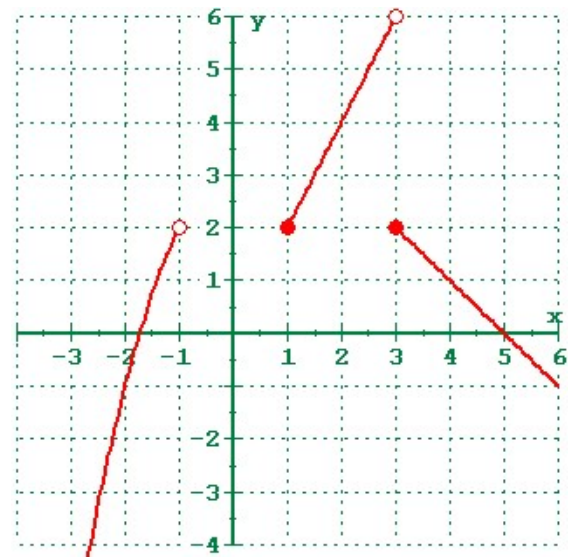
Intervals of Decreasing

Relative Minimum(s)

Relative Maximum(s)

Is it even or odd?

Is it one-to-one?



3.  $f(0)$

$f(-2)$

$x$  if  $f(x) = 4$

Domain

Range

Zero(s)

Is it a function?

Intervals of Increasing

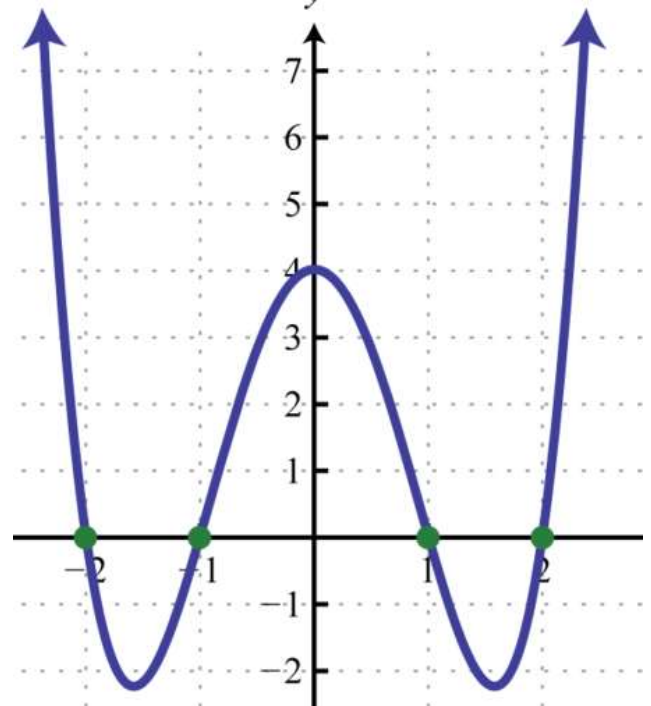
Intervals of Decreasing

Relative Minimum(s)

Relative Maximum(s)

Is it even or odd?

Is it one-to-one?



4. Write the linear function given  $f(-3) = 4$  and  $f(4) = -11$ .

5. Find the x-intercepts of  $f(x) = 3x^2 - 19x - 14$  without a graphing calculator, then check it with a graphing calculator.

6. Sketch the graph of  $y = -2[[x + 1]] + 3$ .

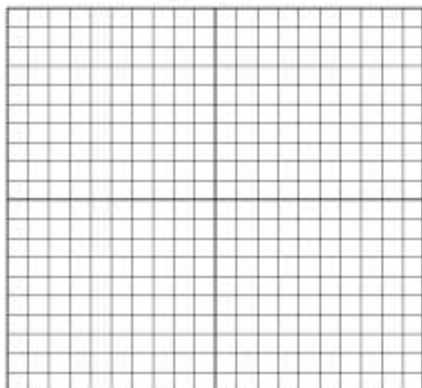
7. Evaluate the following for  $f(x) = \begin{cases} -2|x+1|, & x \leq 1 \\ 3, & 1 < x < 3 \\ 6-2x, & x \geq 3 \end{cases}$ :

$f(10)$

$f(2)$

$f(0)$

9.  $h(x) = \begin{cases} -3x+2, & x \leq 2 \\ \frac{1}{2}x-4, & x > 2 \end{cases}$



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

