

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

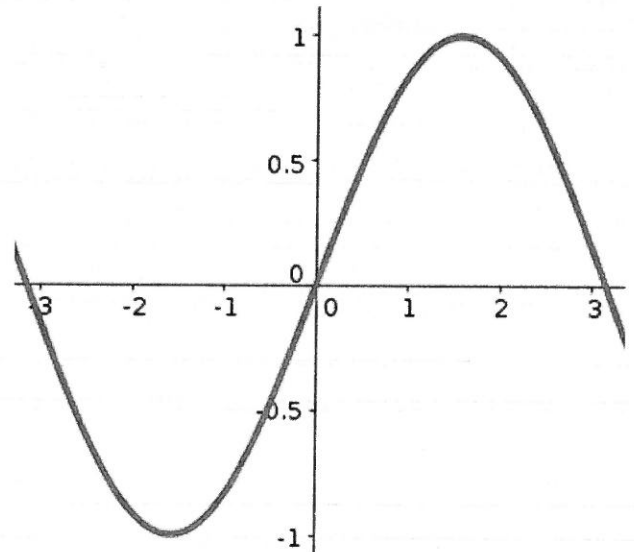
Intervals of Decreasing

Relative Minimum(s)

Relative Maximum(s)

Is it even or odd?

Is it one-to-one?



1. $f(-1)$

$f(1)$

x if $f(x) = 4$

Domain

Range

Zero(s)

Is it a function?

Intervals of Increasing

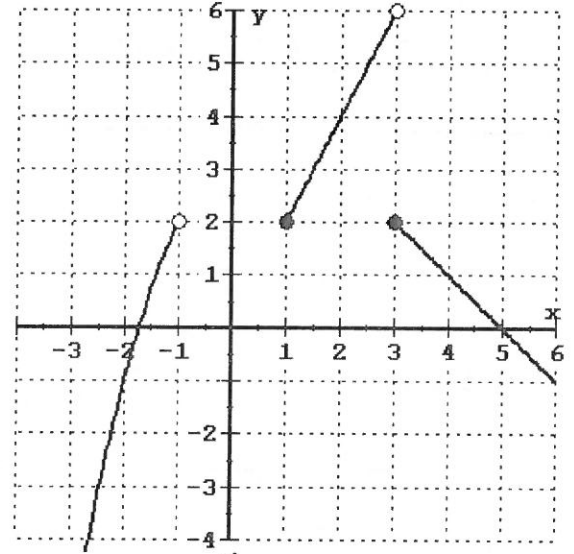
Intervals of Decreasing

Relative Minimum(s)

Relative Maximum(s)

Is it even or odd?

Is it one-to-one?



1. $f(0)$

$f(-2)$

x if $f(x) = 4$

Domain

Range

Zero(s)

Is it a function?

Intervals of Increasing

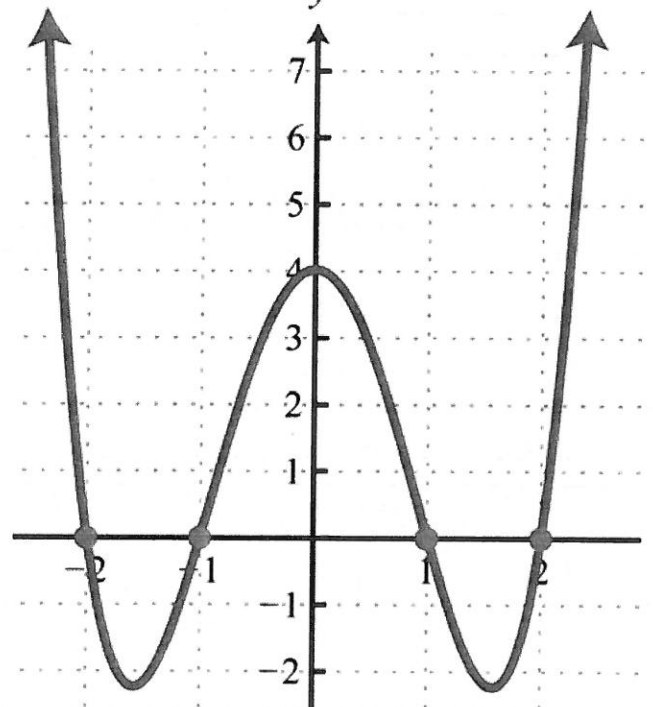
Intervals of Decreasing

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 $f(4) = -11$.

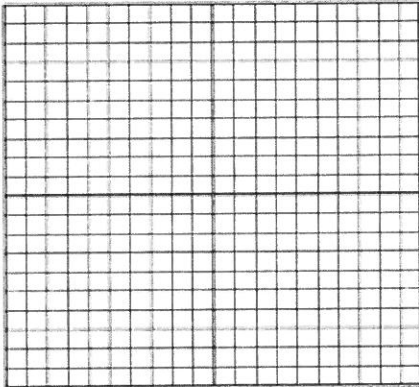
5. Write the linear function given $f(4) = -5$ and $f(-1) = 2$

6. Find the x-intercepts of $f(x) = 3x^2 - 19x - 14$ without a graphing calculator.

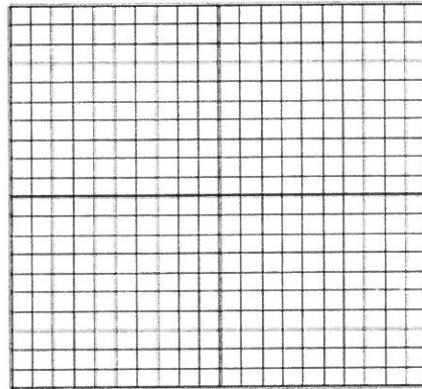
7. Find the zeros of $f(x) = \frac{2x-3}{2-x}$ without a graphing calculator.

8.

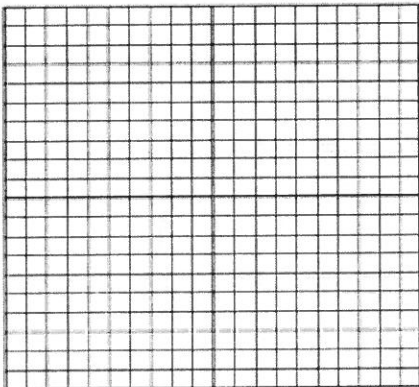
$$9. h(x) = \begin{cases} -3x + 2, & x \leq 2 \\ \frac{1}{2}x - 4, & x > 2 \end{cases}$$



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



$$11. g(x) = \begin{cases} 3x + 12, & x \leq -3 \\ |x|, & -3 < x < 3 \\ -3x + 12, & x \geq 3 \end{cases}$$



$$12. h(x) = \begin{cases} x^2 - 4, & x < 3 \\ \frac{2}{3}x - 5, & x \geq 3 \end{cases}$$

