

1. Explain the difference between  $f(2)$  and  $f(x) = 2$ .

2. Let  $f(x) = 4 - 2x$

- a) Evaluate  $f(-6)$       b) Evaluate  $f(3a)$       c) Evaluate  $f(t+2)$       d) Solve  $f(x) = 5$

3. Let  $g(x) = x^2 - 7$

- a) Evaluate  $g(-3)$   
b) Solve  $g(x) = -6$

4. Let  $h(x) = (x - 2)(x + 7)$

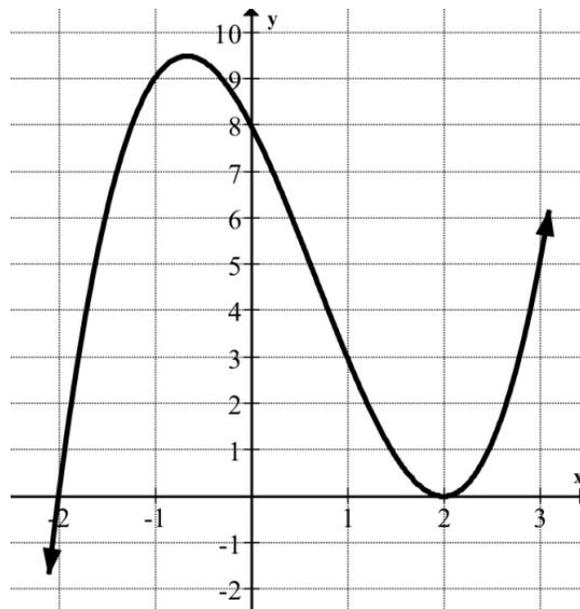
- a) Evaluate  $h(2)$   
b) Evaluate  $h(a)$

5. Let  $f(x) = \frac{8}{x+2}$

- a) Evaluate  $f(14)$       c) Solve  $f(x) = 1$   
b) Evaluate  $f(t)$

6. Use the graph of  $f(x)$  below to answer the following questions.

- Evaluate  $f(3)$
- Evaluate  $f(-1)$
- Solve  $f(x) = 0$
- Solve  $f(x) = -1$
- Identify the domain of this function.
- On what interval is the function decreasing?
- On what interval is the function increasing?
- Does the function have an absolute maximum?



8. Sketch the graph of a function whose domain is  $(-\infty, \infty)$  and whose range is  $(-\infty, \infty)$ .

9. Sketch the graph of a function whose domain is  $(-\infty, \infty)$  and whose range is  $(-\infty, 0]$ .

10. Sketch the graph of a function whose domain and range are both  $[0, \infty)$ .

11. Use the table of values to answer the questions below.

$x$	-7	-2	0	1	3	4	6
$f(x)$	6	3	0	-2	1	0	0

- Evaluate  $f(3)$
- Evaluate  $f(6)$
- Solve  $f(x) = 6$
- Solve  $f(x) = 0$

**CHALLENGE!**

12. Let  $h(x) = x^2 + 5x - 14$ . Solve  $h(x) = 10$