

0.  $k(x)$  is another way of writing \_\_\_\_\_. Why use function notation?

1. Use the functions to find the following. Simplify where possible – expand and combine like terms.

$$f(x) = 6 - 5x \quad g(x) = x^2 - 4 \quad h(x) = \sqrt{x - 3} \quad j(x) = \frac{16}{x} \quad k(x) = 42$$

a.  $g(3) =$

b.  $j(-2) =$

c.  $h(19) =$

d.  $k(100) =$

e.  $f(x - 3) =$

f.  $g(x + 1) =$

g. Find  $x$  if  $f(x) = -49$

h. Find  $x$  if  $g(x) = 32$

i. Find  $x$  if  $j(x) = 64$

\*j.  $f(g(x)) =$

\*k.  $g(h(x)) =$

\*l.  $h(f(x)) =$

2. Use the graph to find the indicated values.

a.  $f(-2) =$

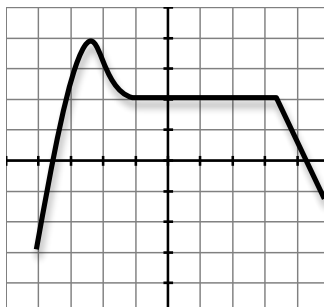
b.  $f(1) =$

c.  $f(-4) =$

d. Find  $x$  if  $f(x) = 4$

e. Find  $x$  if  $f(x) = 3$

f.  $f(-5) =$



3. Little Joey loves to ride on the Ferris wheel at the mall. Each ride costs \$2.50 and that's all that he wants to spend his money on. The amount of spending money he has left from the \$20 that his grandfather gave him can be represented by  $C(r) = 20 - 2.5r$ .

a. Find  $C(2)$

b. Explain what  $C(2)$  represents in Joey's world.

c. Find  $r$  when  $C(r) = 0$

d. Explain what  $C(r) = 0$  represents in Joey's world.

e. Find  $C(9)$

f. Explain what  $C(9)$  represents in Joey's world.

g. Graph  $C(r)$ . Draw your own axes and indicate a scale.

