

Functions

1. If $f(x) = 2x^2 + 1$ and $g(x) = (2x + 5)^2$, find the value of:

a. $f(2)$

b. $f(-3)$

c. $f(0)$

d. $g(2)$

e. $g(-3)$

f. $g(0)$

g. $f(10)$

2. For the functions $f: x \rightarrow 1 - 2x$

$$g(x) = \frac{x^2}{10}$$

$$h: x \rightarrow \frac{12}{x}$$

find:

a. $f(5)$

b. $f(-5)$

c. $f(1/4)$

d. $g(2)$

e. $g(-3)$

f. $g(1/2)$

g. $h(3)$

h. $h(10)$

i. $h(1/3)$

3. If $h(x)$ is defined as the number of letters in the English word describing the number x , for example $h(1) = 3$, $h(5) = 4$
Find:

a. $h(2)$

b. $h(11)$

c. $h(18)$

d. the largest value of x for which $h(x) = 3$.