Functions

1. $f(x) = 3x + 2$.

a) Find f(4)

b) Find f(0)

c) Find f(0.5)

d) Solve $f(x) = 14$

2. $g(x) = 2x^2$.

a) Find g(5)

b) Find g(10)

c) Find g(-3)

d) Solve $g(x) = 72$

3. $h(x) = 4x – 2$.

a) Find h(20)

b) Find h(-3)

c) Solve $h(x) = 30$

d) Solve $h(x) = x$

4. $f(x) = x^2 + 2x$ and $g(x) = 2x + 5$.

a) Find f(2)

b) Find g(5)

c) Calculate f(1) + g(0)

d) Calculate f(4) + g(3)

5. $f(x) = 3 – 2x$ and $g(x) = 4x – 9$.

a) Find g(10)

b) Find f(2)

c) Calculate f(0) + g(3)

d) Solve $g(x) = x$

e) Solve $f(x) = x$

f) Solve $f(x) = g(x)$

6. $f(x) = x^2 + 6x – 16$.

a) Find f(5)

b) Solve $f(x) = -16$

c) Solve $f(x) = 0$

d) Solve $f(x) = 6x$

7. Extension

What is the minimum value of $f(x) = x^2 + 4x + 10$?

Answers

1. a) 14 b) 2 c) 3.5 d) $x = 4$

2. a) 50 b) 200 c) 18 d) $x = 6$

3. a) 78 b)-14 c) $x = 8$ d) $x = 2/3$

4. a) 8 b) 15 c) 8 d) 35

5. a) 31 b) -1 c) 6 d) $x = 3$

e) $x = 3/2$ f) $x = 2$

6. a) 39 b) $x = 0, -6$ c) $x = 2, -8$ d) $x = 4, -4$

7. $f(x) = x^2 + 4x + 10 = (x + 2)^2 + 8$ so minimum value is 8.