

Math 2143 - Brief Calculus with Applications

Quiz #1 - 2006.01.18

Solutions

1. Find an equation for the line with slope 2 which passes through the point $(-3, 4)$.

$$y - 4 = 2(x + 3)$$

2. Find an equation for the line which passes through the points $(-3, 4)$ and $(2, 14)$.

First we find m ,

$$m = \frac{14 - 4}{2 - (-3)} = 2,$$

so we have

$$y - 4 = 2(x + 3),$$

which is the same line as in problem 1.

3. Given that $f(x) = \frac{3-x}{x^2+3}$, answer the following:

- a) Compute $f(3)$

$$f(3) = \frac{3-3}{12} = 0.$$

- b) Compute $f(2+h)$

$$f(2+h) = \frac{3-(2+h)}{(2+h)^2+3} = \frac{-h}{(2+h)^2+3}$$

4. Construct a well defined function with domain $D = \{\text{days of the week}\}$ and range $R = \{\text{months of the year}\}$.

Answers will vary!