MATH1314 College Algebra
Review for Exam 1

Find the percent change if a quantity changes from P_1 to P_2. Round your answer to the nearest tenth if appropriate.

1) $P_1 = \$17, P_2 = \$43$

Find the mean of the set of data. Round to the nearest tenth.

2) 16, 8, 12, 18, 16, 15, 16, 2, 6

Find the distance in the xy-plane between the two points. Round an approximate result to the nearest hundredth.

3) (-3, 1) and (-11, -5)

Find the standard equation of the circle that satisfies the conditions.

4) Center (-9, -2) with the point (-6, 2) on the circle

Specify the domain of the function.

5) $f(x) = \dfrac{\sqrt{x+6}}{(x+7)(x-2)}$

Evaluate the function as indicated.

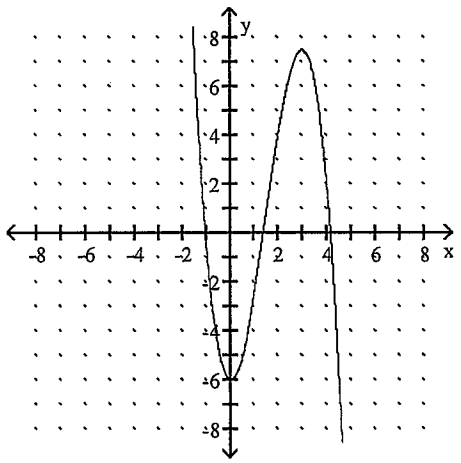
6) Find $f(k-1)$ when $f(x) = 2x^2 - 4x - 3$.

Find the slope of the line that goes through the pair of points.

7) (4, -8) and (9, 7)

Use the graph of f to determine the intervals where f is increasing and where f is decreasing.

8)



Evaluate the function f at the indicated value.

9)

$$f(0) \text{ for } f(x) = \begin{cases} x - 3, \text{ if } x < 3 \\ 9 - x, \text{ if } x \geq 3 \end{cases}$$

Write an equation of the line through the given point with the given slope. Write the equation in slope-intercept form.

10) (8, -3); slope: -7

Solve the equation symbolically.

11) $\frac{1}{2}(4x - 8) = \frac{1}{4}(16x - 8)$

Solve the inequality symbolically. Express the solution set in interval notation.

12) $13x + 7 \geq 12x + 2$

1) 152.9
2) 12.1
3) 10
4) $(x + 9)^2 + (y + 2)^2 = 25$
5) $x \geq -6, x \neq -7, x \neq 2$
6) $2k^2 - 8k + 3$
7) 3
8) increasing: [0, 3]; decreasing: $(-\infty, 0] \cup [3, \infty)$
9) -3
10) $y = -7x + 53$
11) -1
12) $[-5, \infty)$