

Exam 1 Sample Short Answer Questions

Section 2.1

1. Find the x- and y- intercepts of the graph of the equation $x^2 + y^2 = 64$.
2. Find x such that the distance between the points $(0,8)$ and $(x,7)$ is 2.

Section 2.3

3. The perimeter of a triangle is 50 inches. The second side is 2 inches more than twice the first side, and the third side is 6 inches less than three times the first side. Find the lengths of the three sides of the triangle.
4. In a college meal plan you pay a membership fee, then all of your meals are at a fixed price per week. If 30 meals cost \$150 and 70 meals cost \$290, answer the following questions:
 - a. Write a formula for the cost of a meal plan, C , in terms of the number of meals, n .
 - b. What is the cost per meal?
 - c. What is the membership fee?
 - d. What is the maximum number of meals you can buy on a budget of \$300?

Section 3.1

5. Given the function $f(x) = 2x^2 + 3x - 6$, evaluate and simplify $f(x + 1)$.

Section 3.2

6. Find the domain and range of $f(x) = \frac{1}{\sqrt{x-4}}$ algebraically.