5.1 Exercises Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Evaluating Functions and Average Rate of Change

SHOW WORK! Complete on separate paper.

For items 1 – 6, find each of the following:

1. f(0)
2. f(-1)
3. f(2x)
4. f(x + 3)
5. $\frac{f\left(x+h\right)-f(x)}{h}$
6. f(x) = 2x – 1
7. f(x) = -x + 3
8. f(x) = x2 + 4x – 5
9. f(x) = 3x2 + 2x
10. f(x) = x3 – 5
11. f(x) = 2x3 + 5x
12. Find the average rate of change of f(x) = -2x2 + 4
13. From 0 to 2
14. From 1 to 3
15. From 1 to 4
16. Find the average rate of change of f(x) = x3 – 2x + 1
17. From -3 to -2
18. From -1 to 1
19. From 1 to 3
20. g(x) = x2 + 1

 Write the equation of the secant line containing (-2, g(-2)) and (2, g(2)).

1. h(x) = -2x2 + x

Write an equation of the secant line containing (0, (h(0)) and (3, h(3)).