Name _____ Date _____

7.2 Exercises

The Definition of Derivative

Use the definition of derivative to find $f'(x)$.

1. $f(x) = 2x^2 + x - 1$

2. $f(x) = 1 - x^2$

3. $f(x) = x^3 - 12x$

4. $f(x) = x^3 + x^2$

5. $f(x) = \dfrac{1}{x-1}$

6. $f(x) = \dfrac{3}{x+2}$

7. $f(x) = \dfrac{1}{x^2}$

8. $f(x) = \sqrt{x-4}$

Write the equation of the tangent line to the graph of f at the indicated point.

9. $f(x) = 2x^2 + x - 1$ at $(1, 2)$

10. $f(x) = \dfrac{1}{x-1}$ at $(0, -1)$