Math 19: Quiz 4 PRACTICE Name:

For full credit you must (NEATLY) show your work. Partial credit may be given for incorrect solutions if sufficient work is shown.

1. (6 pts) Use the four-step process to find $f'(x)$ for $f(x) = x - 3x^2$.

   - $f(x+h) =$
   - $f(x+h) - f(x) =$
   - $\dfrac{f(x+h) - f(x)}{h} =$
   - $f'(x) =$

2. (2 pts) Find the equation of the tangent line to $f(x) = x - 3x^2$ at $x = 3$.

3. (2 pt) Use any method to evaluate

$$\frac{d}{dx}\left(2x^3 - \frac{1}{\sqrt[3]{x}} + 10\right)$$