

Using the Power Rule to Find Slope

Use the Power Rule to find the equation of the tangent line at the given point:

1) $f(x) = x^5 + 2x^4 - 3x^3 + 4x^2 - x - 6$ at $x = 0$

2) $f(x) = \frac{6}{x^2} - \frac{4}{x} - 5$ at $x = 2$

3) $f(x) = -3x^4 + 4x^2 - 5x$ at $x = 2$ and -2

4) $f(x) = \frac{-3}{x^4} + \frac{4}{x^2} - 5x$ at $x = 1$ and -1

Find the points on the graph at which the slope is zero. Indicate if it is a maximum or a minimum.

5) $f(x) = x^3 - 8x^2 + 5x + 3$

6) $f(x) = \frac{2}{3}x^3 - 2x^2 - 16x - 1$