
Name(PRINT): _____

MAC 2233

Worksheet 4

1. Find the average rate of change of $g(t) = \frac{t+4}{t-1}$ from $t = 2$ to $t = 5$.

Answer:_____

2. Find the difference quotient and derivative (using the definition) for $f(x) = 2\sqrt{x}$.

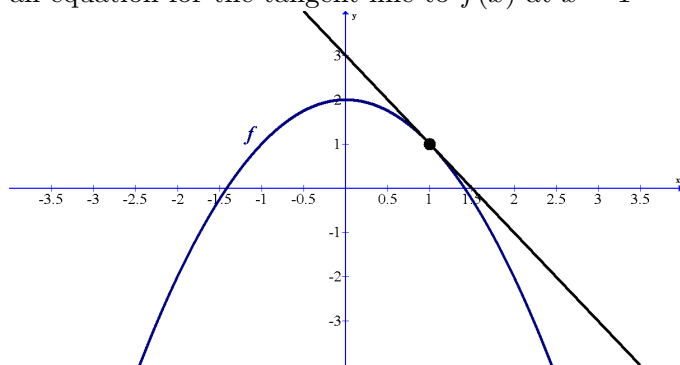
$$\frac{f(x+h) - f(x)}{h} = \underline{\hspace{2cm}}$$

$$\lim_{h \rightarrow 0} \frac{f(x+h) - f(x)}{h} = \underline{\hspace{2cm}}$$

3. Let $f(x) = 1 - 8x - 6x^2$. Find the instantaneous rate of change for $f(x)$ at $x = 0$.

Answer: _____

4. The graph shows a function $f(x)$ and the tangent line to the curve at $x = 1$. Find $f'(1)$ and an equation for the tangent line to $f(x)$ at $x = 1$



$f'(1) =$ _____

Equation of tangent line _____