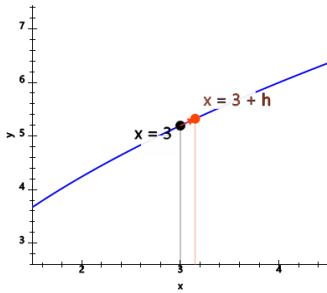


Instantaneous Rate of Change - Close Points to Slope Limit (Tangent)

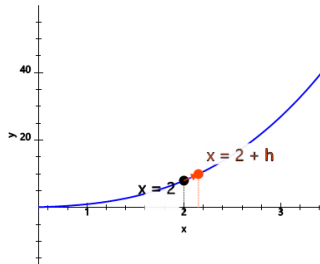
1 Write the simplified difference quotient for the tangent slope of this function as h approaches 0.
 $y = 37x$



A $\lim_{h \rightarrow 0} \left(\frac{3}{\sqrt{x+h} + \sqrt{x}} \right)$ B $\lim_{h \rightarrow 0} \left(\frac{3}{\sqrt{x+h} - \sqrt{x}} \right)$

C $\lim_{h \rightarrow 0} \left(\frac{3}{\sqrt{x+h} - \sqrt{x}} \right)$ D $\lim_{h \rightarrow 0} \left(\frac{3}{2\sqrt{x}} \right)$

2 Write the simplified difference quotient for the tangent slope of this function as h approaches 0.
 $y = x^2$



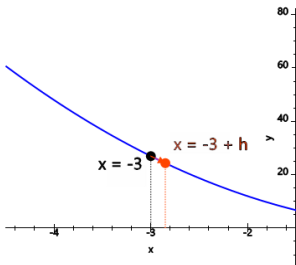
A $\lim_{h \rightarrow 0} (3x^2 + 3xh)$

B $\lim_{h \rightarrow 0} (3x^2 + 3xh + hh^2)$

C $\lim_{h \rightarrow 0} (3x^2 + hxh + hh^2)$

D $\lim_{h \rightarrow 0} (x^2 + 3xh + hh^2)$

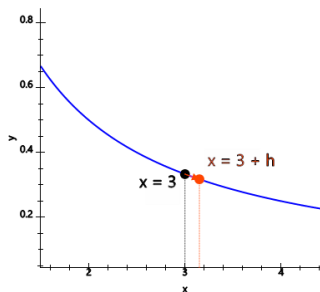
3 Write the simplified difference quotient for the tangent slope of this function as h approaches 0.
 $y = 3x^2$



A $\lim_{h \rightarrow 0} (3x + 3h)$ B $\lim_{h \rightarrow 0} (6x + 3h^2)$

C $\lim_{h \rightarrow 0} (6x + 3h)$ D $\lim_{h \rightarrow 0} (6x + 6h)$

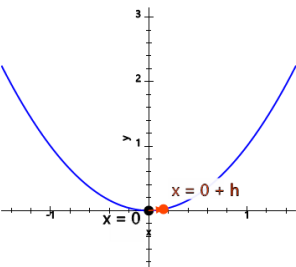
4 Write the simplified difference quotient for the tangent slope of this function as h approaches 0.
 $y = 1/x$



A $\lim_{h \rightarrow 0} \left(\frac{1}{x(x+h)} \right)$ B $\lim_{h \rightarrow 0} \left(\frac{-1}{x+h} \right)$

C $\lim_{h \rightarrow 0} \left(\frac{-1}{x^2} \right)$ D $\lim_{h \rightarrow 0} \left(\frac{-1}{x(x+h)} \right)$

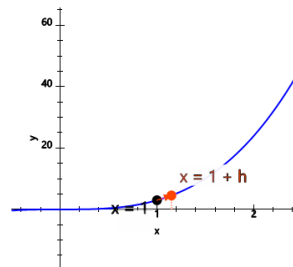
5 Write the simplified difference quotient for the tangent slope of this function as h approaches 0.
 $y = x^2$



A $\lim_{h \rightarrow 0} (x + h)$ B $\lim_{h \rightarrow 0} (2x + h)$

C $\lim_{h \rightarrow 0} (2x + h^2)$ D $\lim_{h \rightarrow 0} (2x + 2h)$

6 Write the simplified difference quotient for the tangent slope of this function as h approaches 0.
 $y = 3x^2$



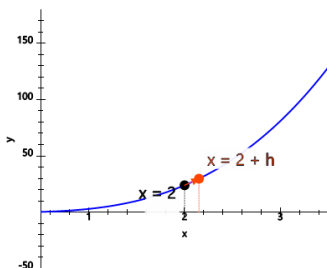
A $\lim_{h \rightarrow 0} (3x^2 + 9xh + 3hh^2)$

B $\lim_{h \rightarrow 0} (9x^2 + 9xh)$

C $\lim_{h \rightarrow 0} (9x^2 + 3hxh + 3hh^2)$

D $\lim_{h \rightarrow 0} (9x^2 + 9xh + 3hh^2)$

7 Write the simplified difference quotient for the tangent slope of this function as h approaches 0.
 $y = 3x^2$



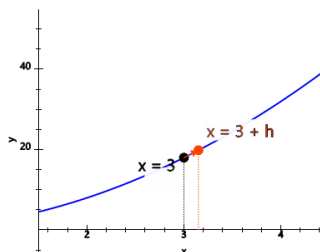
A $\lim_{h \rightarrow 0} (3x^2 + 9xh + 3hh^2)$

B $\lim_{h \rightarrow 0} (9x^2 + 9xh + 3hh^2)$

C $\lim_{h \rightarrow 0} (9x^2 + 3hxh + 3hh^2)$

D $\lim_{h \rightarrow 0} (9x^2 + 9xh)$

8 Write the simplified difference quotient for the tangent slope of this function as h approaches 0.
 $y = 2x^2$



A $\lim_{h \rightarrow 0} (4x + 2h)$ B $\lim_{h \rightarrow 0} (4x + 4h)$

C $\lim_{h \rightarrow 0} (2x + 2h)$ D $\lim_{h \rightarrow 0} (4x + 2h^2)$