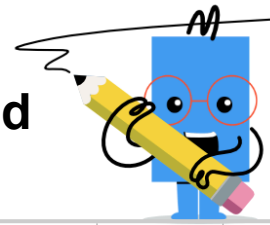
Name

Average Rate of Change - Function and X-Coordinate plus Delta to Slope



1 Find the average rate of change of this function from this x-value over an interval of width h.

$$f(x) = x^2$$
$$f(-1) = ?$$
$$f(-1+h) = ?$$

A $-2-h$ | B -2 | C $-2+h$

D $-1+h$

2 Find the average rate of change of this function from this x-value over an interval of width h.

$$f(x) = 3x - 1$$
$$f(-1) = ?$$
$$f(-1+h) = ?$$

A 3 | B $3h$ | C 6

D $3+h$

3 Find the average rate of change of this function from this x-value over an interval of width h.

$$f(x) = x^3$$
$$f(1) = ?$$
$$f(1+h) = ?$$

A $3+3h+h^2$ | B $3+3h-h^2$

C $3+h$ | D $3+3h$

4 Find the average rate of change of this function from this x-value over an interval of width h.

$$f(x) = \sqrt{x}$$
$$f(1) = ?$$
$$f(1+h) = ?$$

A $\frac{1}{\sqrt{1+h}-\sqrt{1}}$ | B $\frac{1}{2\sqrt{1}}$

C $\frac{1}{\sqrt{1+h}+\sqrt{1}}$ | D $\frac{1}{\sqrt{1+h}}$

5 Find the average rate of change of this function from this x-value over an interval of width h.

$$f(x) = 2x^2$$
$$f(-2) = ?$$
$$f(-2+h) = ?$$

A $-8-2h$ | B -8 | C $-8+2h$

D $-4+2h$

6 Find the average rate of change of this function from this x-value over an interval of width h.

$$f(x) = x^3$$
$$f(0) = ?$$
$$f(0+h) = ?$$

A $0-h^2$ | B 0 | C $0+h$

D $0+h^2$

7 Find the average rate of change of this function from this x-value over an interval of width h.

$$f(x) = 3x^3$$
$$f(1) = ?$$
$$f(1+h) = ?$$

A $9+9h+3h^2$ | B $9+3h$

C $9+9h-3h^2$ | D $9+9h$

8 Find the average rate of change of this function from this x-value over an interval of width h.

$$f(x) = 3x^3$$
$$f(2) = ?$$
$$f(2+h) = ?$$

A $36+18h-3h^2$ | B $36+18h+3h^2$

C $36+18h$ | D $36+3h$