

Name : \_\_\_\_\_

Score : \_\_\_\_\_

Teacher : \_\_\_\_\_

Date : \_\_\_\_\_

## Average Rate of Change

Find the average rate of change over the given interval.

1)  $e^{-4x-16}$  ; [ -5, -3 ]

2)  $x^2 + 6x - 7$  ; [ -4, -2 ]

3)  $-x^3 + 5x^2 + 9x - 45$  ; [ -1, 2 ]

4)  $e^{-2x-4}$  ; [ -2, -1 ]

5)  $e^{2x-12}$  ; [ 7, 9 ]

6)  $x^3 - 5x^2 + 6x$  ; [ 1, 3 ]

7)  $\frac{-x^2 + 9}{3x^2}$  ; [ 3, 6 ]

8)  $x^2 - 5x + 4$  ; [ 3, 6 ]

9)  $-x^3 + 16x^2 - 81x + 126$  ; [ 4, 5 ]

10)  $x^2 - x$  ; [ -5, -3 ]

11)  $\frac{x(x + 8)}{6(x + 4)^2}$  ; [ -1, 0 ]

12)  $\frac{-3}{(x - 6)^2}$  ; [ 8, 9 ]



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Find the average rate of change over the given interval.

1)  $e^{-4x-16}$  ; [ -5, -3 ]

-27.2899

2)  $x^2 + 6x - 7$  ; [ -4, -2 ]

0

3)  $-x^3 + 5x^2 + 9x - 45$  ; [ -1, 2 ]

11

4)  $e^{-2x-4}$  ; [ -2, -1 ]

-0.8647

5)  $e^{2x-12}$  ; [ 7, 9 ]

198.0199

6)  $x^3 - 5x^2 + 6x$  ; [ 1, 3 ]

-1

7)  $\frac{-x^2 + 9}{3x^2}$  ; [ 3, 6 ]

-0.0833

8)  $x^2 - 5x + 4$  ; [ 3, 6 ]

4

9)  $-x^3 + 16x^2 - 81x + 126$  ; [ 4, 5 ]

2

10)  $x^2 - x$  ; [ -5, -3 ]

-9

11)  $\frac{x(x + 8)}{6(x + 4)^2}$  ; [ -1, 0 ]

0.1296

12)  $\frac{-3}{(x - 6)^2}$  ; [ 8, 9 ]

0.4167

