

**Directions:** Select the letter of the correct answer to each question below.

1) What is the derivative of the function  $f(x) = \frac{1}{2}x^2$

(a)  $f'(x) = x^2$

(b)  $f'(x) = \frac{1}{2}x$

(c)  $f'(x) = x^{-2}$

(d)  $f'(x) = x$

2) Compute for the derivative of  $f(x) = 3x^2 - x$

(a)  $f'(x) = 6x$

(b)  $f'(x) = 6x - 1$

(c)  $f'(x) = 6x^2 - 1$

(d) None of the above

3) Identify the derivative of  $f(x) = x^2 - 2x + 9$

(a)  $f'(x) = 2x - 7$

(b)  $f'(x) = x^2 - 2$

(c)  $f'(x) = 2x - 1$

(d)  $f'(x) = 2x - 2$



## Basic Differentiation

### *Practice Questions*

4) Compute the derivative of  $f(x) = (2x - 1)^2$

(a)  $f'(x) = 8x - 4$

(b)  $f'(x) = 8x^2 - x$

(c)  $f'(x) = 8x + 4$

(d) Cannot be differentiated

5) Which of the following is the value of  $dy/dx$  if  $y = 7x^2 - x^5$ ?

(a)  $14x - 5x^2$

(b)  $14x - 10x^4$

(c)  $14x^2 - 5x$

(d)  $14x - 5x^4$



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***To God be the glory!***