

## 5.4 The Definite Integral.

Provide an appropriate response.

1) Given  $\int_1^3 f(x) dx = 4$  and  $\int_1^3 g(x) dx = 2$ , use properties of definite integrals to evaluate 1) \_\_\_\_\_

$$\int_1^3 [2f(x) + 5g(x)] dx.$$

- A) 54                      B) 18                      C) 24                      D) 13

Evaluate the integral.

2)  $\int_{-1}^1 (3x^2 - 8x) dx$  2) \_\_\_\_\_

A) 2                      B) 12                      C) 7                      D) -7

3)  $\int_3^{16} 3\sqrt{x} dx$  . 3) \_\_\_\_\_

A) 288                      B) 128                      C) 192                      D) 24

4)  $\int_0^b 9x^8 dx$  4) \_\_\_\_\_

A)  $9b^9$                       B)  $b^7$                       C)  $b^9$                       D)  $\frac{1}{9}b^9$

5)  $\int_1^e \left( 16x - \frac{5}{x} \right) dx$  5) \_\_\_\_\_

(Express your answer in terms for e.)

A)  $8e^2 - 8$                       B)  $8e^2 - 13$                       C)  $16e^2 - 5$                       D)  $8e^2 - 5$

6)  $\int_{0.1}^{0.4} 5e^{2x} dx$  6) \_\_\_\_\_

(Round to three decimal places.)

A) 0.425                      B) 5.021                      C) 0.967                      D) 2.510

7)  $\int_1^2 \left[ 4\sqrt{x} - \frac{5}{x} \right] dx$  7) \_\_\_\_\_

(Round to three decimal places.)

A) 1.410                      B) 3.001                      C) 12.846                      D) 7.505

8)  $\int_0^2 \frac{4x + 1}{4x^2 + 2x + 2} dx$  8) \_\_\_\_\_

(Round to three decimal places.)

A) 1.040                      B) 1.778                      C) 1.199                      D) 2.398

Answer Key

Testname: PRACTICE08

- 1) B
- 2) A
- 3) B
- 4) C
- 5) B
- 6) D
- 7) A
- 8) C