

**04-05-Definite Integrals****Multiple Choice**

Identify the choice that best completes the statement or answers the question.

- \_\_\_\_\_ 1. Find the definite integral.

$$\int_0^1 (2x + e^x) dx$$

- |              |                          |
|--------------|--------------------------|
| a. $1 + e^2$ | d. $e$                   |
| b. $2 + e^2$ | e. None of these choices |
| c. $2e$      |                          |

- \_\_\_\_\_ 2. Find the definite integral.

$$\int_1^2 (3x^2 + 2) dx$$

- |      |                          |
|------|--------------------------|
| a. 3 | d. 12                    |
| b. 6 | e. None of these choices |
| c. 9 |                          |

- \_\_\_\_\_ 3. Find the definite integral.

$$\int_0^2 (e^x + 1) dx$$

- |              |              |
|--------------|--------------|
| a. $2e^2$    | d. $e^3$     |
| b. $e^2 + 1$ | e. $e^3 + 1$ |
| c. $e^2 + 2$ | f. $e^3 + 2$ |

- \_\_\_\_\_ 4. Using the substitution  $u = x^2 + 2$ ,  $\int_0^1 8x \cdot (x^2 + 2)^3 dx$  is equal to which of the following?

- |                        |                        |
|------------------------|------------------------|
| a. $\int_2^3 4u^3 du$  | d. $\int_2^3 8u^3 du$  |
| b. $\int_0^1 4u^3 du$  | e. $\int_0^1 8u^3 du$  |
| c. $\int_2^3 4xu^3 du$ | f. $\int_0^1 8xu^3 du$ |

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

ID: A

\_\_\_\_\_ 5. Find the definite integral.

$$\int_{\ln \frac{\pi}{2}}^{\ln \pi} e^x \cos(e^x) dx$$

a. -1

b. 0

c. 1

d.  $\frac{\pi}{2}$

e.  $\pi$

f. None of these choices

\_\_\_\_\_ 6. Given  $\int_0^5 f(x) dx = 4$  and  $\int_3^5 f(x) dx = 1$ , find the value of  $\int_0^3 f(x) dx$

a. 1

b. 3

c. 5

d. 7

e. Cannot be determined.

**04-05-Definite Integrals  
Answer Section****MULTIPLE CHOICE**

- |           |        |                         |
|-----------|--------|-------------------------|
| 1. ANS: D | PTS: 1 | REF: GSU Calculus       |
| 2. ANS: C | PTS: 1 | REF: Matt's Math Labs © |
| 3. ANS: B | PTS: 1 | REF: Matt's Math Labs © |
| 4. ANS: A | PTS: 1 | REF: Matt's Math Labs © |
| 5. ANS: A | PTS: 1 | REF: Matt's Math Labs © |
| 6. ANS: B | PTS: 1 | REF: GSU Calculus       |