

1.2 Algebraic Expressions

MULTIPLE CHOICE

1. Simplify.

$$7x - 18y + 5x - 3y$$

- a. $-9xy$
- b. $-11x + 2y$
- c. $12x + 21y$
- d. $12x - 21y$

ANS: D PTS: 1

2. Simplify.

$$3(2x - 3) - 5(4x + 2)$$

- a. $-14x - 19$
- b. $-54x$
- c. $26x + 19$
- d. $26x - 19$

ANS: A PTS: 1

3. Simplify.

$$-\frac{8}{3} \left(\frac{3}{20}x + \frac{3}{16} \right) - \frac{1}{2}$$

- a. $\frac{2}{5}x$
- b. $-\frac{2}{5}x - 1$
- c. $x - 1$
- d. $-\frac{2}{5}x + 1$

ANS: B PTS: 1

4. Simplify.

$$5x^2(6x - 7)$$

- a. $30x^3 - 35x^2$
- b. $-5x^3$
- c. $-5x^2$
- d. $30x^2 - 35x$

ANS: A PTS: 1

5. Simplify.

$$-3.5(3x^2 - 2x + 8)$$

- a. $10.5x^2 - 7x - 28$
- b. $-10.5x^2 - 7x - 28$
- c. $-10.5x^2 + 7x - 28$
- d. $-10.5x^2 + 7x + 28$

ANS: C PTS: 1

6. Identify the property.

$$5 + 8 = 8 + 5$$

- a. Associative property of addition
- b. Additive identity
- c. Additive inverse
- d. Commutative property of addition

ANS: D PTS: 1

7. Identify the property.

$$8 \cdot (5 \cdot x) = 8 \cdot (x \cdot 5)$$

- a. Commutative property of multiplication
- b. Multiplicative inverse
- c. Associative property of multiplication
- d. Multiplicative identity

ANS: A PTS: 1

8. Simplify.

$$15k^2 - 8k^3 - 4k^3$$

- a. $15k^2 - 12k^3$
- b. $15k^2 + 12k^3$
- c. $27k^5$
- d. $3k$

ANS: A PTS: 1

9. Simplify.

$$(7x^2y^3)^3$$

- a. $49x^6y^9$
- b. $343x^6y^9$
- c. $343x^5y^6$
- d. $49x^5y^6$

ANS: B PTS: 1

10. Simplify.

$$7x^0$$

- a. 1
- b. 7
- c. 0
- d. $7x$

ANS: B

PTS: 1

11. Simplify.

$$\left(\frac{x^8 y^7}{x} \right)^8 y^3$$

- a. $x^{64} y^{59}$
- b. xy^{59}
- c. x^{115}
- d. $x^{56} y^{59}$

ANS: D

PTS: 1

12. Simplify.

$$\frac{x^3}{x^6}$$

- a. x^3
- b. x^2
- c. $\frac{1}{x^3}$
- d. $\frac{1}{x^2}$

ANS: C

PTS: 1

13. Simplify.

$$4y(3y^2 - 2y - 1) - 2(2y^2 - 3y)$$

- a. $2y^2 - 12y$
- b. $10y$
- c. $12y^3 - 12y^2 + 10y$
- d. $12y^3 - 12y^2 + 2y$

ANS: D

PTS: 1

14. Simplify.

$$\frac{7b}{5} - \frac{4b}{3}$$

- a. b
- b. $\frac{3}{2}b$
- c. $\frac{3}{5}b$
- d. $\frac{1}{15}b$

ANS: D

PTS: 1

15. Simplify.

$$\left(\frac{x^5 y^7}{x^5 y^9} \right)^3$$

- a. $\frac{1}{y^6}$
- b. $\frac{1}{y^5}$
- c. y^6
- d. y^5

ANS: A

PTS: 1