

## SIMPLIFYING ALGEBRAIC EXPRESSIONS

Simplify each expression by collecting the like terms.

1  $3x + 5 + 7x + 10$

2  $7x - 3 + 3x - 2$

3  $4a + b - a - 4b$

4  $6ab + 3ab + 5a + 4a$

5  $3xy + 2xy - yx$

6  $3a^2b - 3ab^2 + 2a^2b$

7  $2x^2y + 3x^2y^2 - x^2y + 3x^2y^2$

8  $3abc + 5bca - 2cba$

9  $12mn + 3m - 6mn - m$

Simplify each expression by expanding the brackets and then collecting the like terms.

12  $5a - 3(a + b)$

13  $4(2x - y) - 6x$

14  $8m - 5(2m - 3n)$

18  $5a(a + 2) - 3a(a + 1)$

19  $5x(x - 2y) + 3x(2x - y)$

20  $2a + 3b - (a - b)$

21  $x + 5y - (3x + 2y)$

22  $5x(2x + 1) - (x^2 + x)$

23  $15(x - 2) + 4(3x - 3)$

27 The expression  $a(a + 1) - 3(2a + 1)$  simplifies to:

A  $a^2 - 7a - 3$

B  $a^2 - 5a + 3$

C  $a^2 - 5a - 3$

D  $a^2 - 7a + 3$

28 The expression  $3(m^2 - m) - 2(m^2 + 2m + 5)$  simplifies to:

A  $5m^2 - 7m - 10$

B  $m^2 - 7m - 10$

C  $m^2 + m - 10$

D  $m^2 - 7m + 10$