

1. Simplify each algebraic expression. Then state the degree of the solution.

a) $2x - 3y + x + 5y - 3$

c) $3x(2x - 1)$

b) $-2y^2 + 5x^2y - 4y^2 + 2x^2y - xy^2$

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

2. Simplify each algebraic expression.

a) $(x + 3)(x + 4)$

e) $(x + 7)(x - 7)$

b) $(x - 2)(x + 5)$

f) $(3x + 2)^2$

c) $(2x + 5)(x - 1)$

g) $(2x - 3)(x^2 - 2x + 1)$

d) $(x - 3y)(x + 6y)$

h) $(x^2 - 3x + 2)(3x^2 + 2x - 5)$

3. Simplify each algebraic expression.

a) $3(2x - 3)(2x + 3) - (x - 4)^2$

b) $(x - 2)^3$

4. Your rectangular flower garden measures $5\text{ m} \times 3\text{ m}$. You decide to expand the garden by the same amount on all sides. Sketch and label diagram of the situation. Write and simplify an algebraic expression representing the area of the new garden.