



Algebra 1

Topic: Multiplying Polynomials

Instructions

Solve the following problems by multiplying the polynomials. Show all steps clearly and check your solutions.

Practice Problems

1. Find the product:

(i) $(2x)(x + 4)$

(ii) $(3a)(a - 5)$

(iii) $(5y)(y + 2)$

(iv) $(4m)(m - 3)$

(v) $(7x)(x - 1)$

(vi) $(6a)(2a + 3)$

2. Multiply the following binomials:

(i) $(x + 3)(x + 5)$

(ii) $(a - 4)(a + 2)$

(iii) $(y + 7)(y - 3)$

(iv) $(m + 1)(m - 2)$

(v) $(2x - 1)(x + 4)$

(vi) $(3a + 2)(a - 5)$

3. Multiply the following polynomials:

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

(ii) $(a - 3)(a^2 + 2a - 5)$

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

(iv) $(4m + 5)(m^2 - 2m + 1)$

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

(vi) $(a - 2)(a^2 + 3a - 1)$

4. Use the distributive property to multiply the following polynomials:

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

(iv) $(2m + 3)(m + 5)$

(ii) $(5a - 7)(a + 6)$

(v) $(x - 5)(x + 3)$

(iii) $(4y + 1)(y - 3)$

(vi) $(6a + 4)(a - 2)$

Multiple-Choice Questions

1. What is the product of $(x + 2)(x + 5)$?

A. $x^2 + 7x + 10$

C. $x^2 + 12x + 10$

B. $x^2 + 10x + 7$

D. $x^2 + 12x + 15$

2. What is the result of multiplying $(a + 3)(a - 2)$?

A. $a^2 + a - 6$

C. $a^2 + 1a - 6$

B. $a^2 + 5a - 6$

D. $a^2 + 5a + 6$

3. What is the product of $(2x + 5)(x - 3)$?

A. $2x^2 - x - 15$

C. $2x^2 + 15x - 15$

B. $2x^2 - 11x - 15$

D. $2x^2 + 7x - 15$

4. What is the result of multiplying $(y - 4)(y + 6)$?

A. $y^2 + 2y - 24$

C. $y^2 - 10y + 24$

B. $y^2 + 2y + 24$

D. $y^2 + 10y - 24$

5. What is the product of $(a - 1)(a + 7)$?

A. $a^2 + 6a - 7$

C. $a^2 - 6a + 7$

B. $a^2 + 6a + 7$

D. $a^2 - 6a - 7$

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