

SKILL

Skills Readiness**64****Multiply Binomials**

Definition: A binomial is the sum or difference of two monomials.

To multiply a binomial by another binomial, use the Distributive Property twice.

Example: Multiply $(x + 6)(3x - 5)$.

$$= x(3x - 5) + 6(3x - 5)$$

$$= x(3x) - x(5) + 6(3x) + 6(-5)$$

$$= 3x^2 - 5x + 18x - 30$$

$$= 3x^2 + 13x - 30$$

First use of the Distributive Property.

Second use of the Distributive Property.

Multiply using properties of exponents.

Combine like terms ($-5x + 18x = 13x$).

Practice on Your Own

Find each product.

1. $(n + 6)(n + 3)$

2. $(c + 12)(c - 5)$

3. $(10q + 3)(q + 4)$

4. $(k + 7)(3k - 1)$

5. $(u - 1)(u + 1)$

6. $(r + 6)(r + 6)$

7. $(5a - 4)(5a + 4)$

8. $(3g + 1)(8g + 12)$

9. $(5z + 8)(4z - 2)$

10. $(4p - 9)(2p - 1)$

Check

Find each product.

11. $(x + 4)(x + 7)$

12. $(2w + 6)(w - 9)$

13. $(p + 5)(p + 5)$

14. $(2t + 7)(2t - 7)$

15. $(7y - 3)(y - 1)$

16. $(3m + 4)(9m + 2)$
