

## Study Guide

**Special Products**

You can use the FOIL method to find some special products.

<b>Square of a Sum</b>	$(a + b)^2 = (a + b)(a + b) = a^2 + 2ab + b^2$
<b>Square of a Difference</b>	$(a - b)^2 = (a - b)(a - b) = a^2 - 2ab + b^2$
<b>Difference of Squares</b>	$(a + b)(a - b) = (a - b)(a + b) = a^2 - b^2$

Study the examples below.

<b>Binomials</b>	<b>Product</b>
$(3n + 4)^2$	$9n^2 + 24n + 16$
$(2z - 9)^2$	$4z^2 - 36z + 81$
$(5x - 3y)(5x + 3y)$	$25x^2 - 9y^2$

**Find each product.**

1.  $(x - 6)^2$

2.  $(3p + 4)^2$

3.  $(x + 11)(x - 11)$

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

5.  $(4x - 5)^2$

6.  $(9x - y)(9x + y)$

7.  $(m + 5)^2$

8.  $(8a - 7b)(8a + 7b)$

9.  $(4a - 3b)^2$

10.  $(3 - 5q)(3 + 5q)$

11.  $(x^2 - 2)^2$

12.  $(2.5 + q)^2$

13.  $\left(\frac{3}{4}x + 1\right)\left(\frac{3}{4}x - 1\right)$

14.  $(0.3p - 2q)^2$

15.  $\left(\frac{1}{2}y + z\right)^2$

16.  $(8 + x)^2$

17.  $(6c - 10)(6c + 10)$

18.  $(x^3 - 1)^2$