

Example 8: Factor $x^2 + 12x + 36$

$$a^2 = x^2 \quad b^2 = 36$$

$$a = 1x \quad b = 6$$

$$(a+b)^2$$

$$(x+6)^2$$

$$(x+6)^2$$

$$(x+6)(x+6)$$

$$x^2 + 6x + 6x + 36$$

$$\checkmark x^2 + 12x + 36$$

Practice 8: $x^2 + 14x + 49$

$$a^2 = x^2 \quad b^2 = 49$$

$$a = x \quad b = 7$$

$$(a+b)^2$$

$$(x+7)^2$$

$$(x+7)^2$$

$$(x+7)(x+7)$$

$$x^2 + 7x + 7x + 49$$

$$\checkmark x^2 + 14x + 49$$

Example 9: Factor $25x^2 + 25xy + 4y^2$

$$a^2 = 25x^2 \quad b^2 = 4y^2$$

$$a = 5x \quad b = 2y$$

$$(a+b)^2$$

$$(5x+2y)^2$$


Practice 9: $4x^2 + 20xy + 9y^2$

$$a^2 = 4x^2 \quad b^2 = 9y^2$$

$$a = 2x \quad b = 3y$$

$$(a+b)^2$$

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

 Vocabulary, Readiness & Video Check

Use the choices below to fill in each blank. Some choices will be used more than once and some not used at all.

$5y^2$	$(x + 5y)^2$	perfect square trinomial
$(5y)^2$	$(x - 5y)^2$	perfect square binomial

- A perfect square trinomial is a trinomial that is the square of a binomial.
- The term $25y^2$ written as a square is $(5y)^2$.
- The expression $x^2 + 10xy + 25y^2$ is called a perfect square trinomial.
- The factorization $(x + 5y)(x + 5y)$ may also be written as $(x + 5y)^2$.

Complete each factorization.

- $2x^2 + 5x + 3$ factors as $(2x + 3)(\quad)$. **d**
 - $(x + 3)$
 - $(2x + 1)$
 - $(3x + 4)$
 - $(x + 1)$
- $7x^2 + 9x + 2$ factors as $(7x + 2)(\quad)$. **b**
 - $(3x + 1)$
 - $(x + 1)$
 - $(x + 2)$
 - $(7x + 1)$

6.3 DAY TWO HW Assignment

96. $y^4 - 9$ 98. $z^3 - 8$

pg. 401: 39 - 93 (eoo), 95 - 102

100. Twitter

102. on possible answer: rounding error