

Name

8.7 Factor Special Products

Alg I

I can factor special products.

Different of 2 Squares Pattern:

$$* a^2 - b^2 = (a+b)(a-b) \quad 4x^2 - 9 = (2x+3)(2x-3)$$

h.8 Quiz

Example 1/2:

h.7/8 Test

$$1) 4y^2 - 64 = 4(y^2 - 16) = \boxed{4(y+4)(y-4)}$$

Perfect Square Trinomial Patterns:

$$* a^2 + 2ab + b^2 = (a+b)^2 \quad x^2 + 6x + 9 = (x+3)^2$$

$$* a^2 - 2ab + b^2 = (a-b)^2 \quad x^2 - 10x + 25 = (x-5)^2$$

Complete kills Practice, pg. 545, #

Example 3/4:

$$2) h^2 + 4h + 4$$

$$\boxed{(h+2)^2}$$

$$3) 2y^2 - 20y + 50$$

$$2(y^2 - 10y + 25)$$

$$\boxed{2(y-5)^2}$$

$$4) 3x^2 + 6xy + 3y^2$$

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

$$\boxed{3(x+y)^2}$$

Example 5:

$$5) a^2 + 6a + 9 = 0$$

$$(a+3)^2 = 0$$

$$a+3=0$$

$$-3 \quad -3$$

$$\boxed{a=-3}$$

$$6) w^2 - 14w + 49 = 0$$

$$(w-7)^2 = 0$$

$$w-7=0$$

$$+7 \quad +7$$

$$\boxed{w=7}$$

$$7) n^2 - 81 = 0$$

$$(n-9)(n+9) = 0$$

$$n-9=0$$

$$+9 \quad +9$$

$$\boxed{n=9}$$

$$n+9=0$$

$$-9 \quad -9$$

$$\boxed{n=-9}$$