

Using Patterns and Formulas Assignment

Use the ***difference of two squares*** pattern $A^2 - B^2 = (A - B)(A + B)$ to FACTOR the following.

$$x^2 - 49$$

$$5x^2 - 80$$

$$64x^2 - 9y^2$$

$$4x^2 - 81$$

$$x^4 - 16$$

$$-x^2 + 25$$

Use the ***perfect square trinomial*** pattern $(A + B)^2 = A^2 + 2AB + B^2$ to EXPAND the following.

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

$$(-5x + 1)^2$$

$$(7x - y)^2$$

$$(x^4 + 2)^2$$

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

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

Use the SUM or DIFFERENCE of Cubes to Expand the following

SUM OF CUBES

DIFFERENCE OF CUBES

$$A^3 + B^3 = (A + B)(A^2 - AB + B^2) \quad A^3 - B^3 = (A - B)(A^2 + AB + B^2)$$

$$x^3 + 125$$

$$2x^3 + 54$$

$$8x^3 - 1$$

$$27x^3 - y^3$$

$$16x^3 - 2$$

Challenge

$$x^6 - y^6$$