Follow-up questions to online notes

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

$x^2-121\rightarrow$ (____ − ____)(____ + ____)

$9x^2-49\rightarrow$ (____ − ____)(____ + ____)

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

$\left(7x+5\right)^2\rightarrow$ ____ + ____ + ____

$\left(2x+3y\right)^2\rightarrow$ ____ + ____ + ____

Introducing the Sum and Difference of Cubes

Confirm both patterns below by expanding the **right side** and matching it to the left.

SUM OF CUBES

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

DIFFERENCE OF CUBES

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

What patterns do I see that will help me remember these patterns?

_____

_____

_____

Using the Sum and Difference of Cubes Patterns to Expand Polynomials

SUM OF CUBES

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

$m^3 + 27$

$16a^3 + 54$

DIFFERENCE OF CUBES

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

$8a^3 - 27$

$16a^3 - 2$