

LESSON 4.6 Assignment

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3. Olivia and Ashley created their own formulas in order to observe any patterns they might generate. Olivia's formula is $a^4 + b^4$ where a and b are positive integers and $a > b$. Ashley's formula is $a^4 - b^4$ where a and b are positive integers and $a > b$.
- a. Complete each table.

Olivia's Formula: $a^4 + b^4$

		b				
		1	2	3	4	5
a	1					
	2					
	3					
	4					
	5					

4

Ashley's Formula: $a^4 - b^4$

		b				
		1	2	3	4	5
a	1					
	2					
	3					
	4					
	5					

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Name _____ Date _____

b. Describe any and all patterns you see in each table.



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4. Verify $(a + b)^3 (a - b)^3 = (a^2 - b^2) (a^4 - 2a^2b^2 + b^4)$ by transforming one side of the equation to show that it is equivalent to the other side of the equation.

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