

Name:	Date:
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Topic:	Class:
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Main Ideas/Questions	Notes/Examples
ARITHMETIC SEQUENCE	
COMMON DIFFERENCE	
IDENTIFYING <i>an Arithmetic Sequence</i>	Determine whether the sequences are arithmetic. If yes, identify the common difference.
	1. 1, 5, 9, 13, ... 2. 1, 3, 5, 8, ...
	3. 8, 6, 4, 2, ... 4. -5, -8, -11, -14, ...
	5. 5, 10, 20, 40, ... 6. 7, 6, 5, 4, ...
CONTINUING <i>Arithmetic Sequences</i>	Given the arithmetic sequence, find the next three terms.
	7. 9, 13, 17, 21, _____, _____, _____
	8. 5, 2, -1, -4, _____, _____, _____
	9. -8, -2, 4, 10, _____, _____, _____
<i>Arithmetic Sequence</i> FORMULA	The n^{th} term of an arithmetic sequence can be found using the following formula: $d = \underline{\hspace{2cm}}$; $a_1 = \underline{\hspace{2cm}}$
EXAMPLES	Write the rule for the n^{th} term, then find a_{19}.
	10. 7, 13, 19, 25, ... 11. 30, 26, 22, 18, ...

	12. -11, -8, -5, -2 ...	13. -2, 0, 2, 4, ...
	14. -16, -21, -26, -31, ...	15. 101, 92, 83, 74, ...
APPLICATIONS	<p>16. You visit the Grand Canyon and drop a penny off the edge of the cliff. The distance the penny will fall is 16 feet for the first second, 48 feet the next second, 80 feet the third second, and so on.</p> <p>a. Write a formula to represent this sequence.</p> <p>b. How far will the penny have traveled after 6 seconds?</p>	
	<p>17. The total bank loan for Sarah's new car is \$15,265. The bank automatically withdraws \$295.80 each month to pay off the car.</p> <p>a. Write a formula to represent this sequence.</p> <p>b. What will be the balance of the loan after 2 years?</p>	