

Name: _____

Date: _____

Topic: _____

Class: _____

Main Ideas/Questions	Notes							
Arithmetic Sequence								
Common Difference								
Identifying an Arithmetic Sequence	<p><i>Determine whether the sequences are arithmetic sequences. If yes, identify the common difference.</i></p> <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">1. 1, 5, 9, 13, ...</td> <td style="width: 50%;">2. 1, 3, 5, 8, ...</td> </tr> <tr> <td>3. 8, 6, 4, 2, ...</td> <td>4. -5, -8, -11, -14, ...</td> </tr> <tr> <td>5. 5, 10, 20, 40, ...</td> <td>6. 7, 6, 5, 4, ...</td> </tr> </table>		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, ...
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5. 5, 10, 20, 40, ...	6. 7, 6, 5, 4, ...							
Continuing Arithmetic Sequences	<p><i>Given the arithmetic sequence, find the next three terms.</i></p> <p>7. 9, 13, 17, 21, _____, _____, _____</p> <p>8. 5, 2, -1, -4, _____, _____, _____</p> <p>9. -8, -2, 4, 10, _____, _____, _____</p>							
Arithmetic Sequence Formula	<p>The n^{th} term of an arithmetic sequence can be found using the following formula:</p> <p style="text-align: center;">$d =$ _____ $a_1 =$ _____</p>							
Examples Write the rule for the n^{th} term, then find a_{19} .	10. 7, 13, 19, 25, ...	11. 30, 26, 22, 18, ...						

Main Ideas/Questions	Notes	
	12. -11, -8, -5, -2 ...	13. -2, 0, 2, 4, ...
	14. -16, -21, -26, -31, ...	15. 101, 92, 83, 74, ...
Real Life 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>	