

I. Complete the chart below. Must show work for credit!

Given Sequence	Determine If Arithmetic	Common Difference d	Next Three Terms
1.) 7, 11, 15, 19, ...	Yes	$\rightarrow d = 4$	$a_5 = 23$ $a_6 = 27$ $a_7 = 31$
2.) 3, 6, 9, 13, ...	No	$\rightarrow d = N/A$	X
3.) 31, 23, 15, 7, ...	Yes	$\rightarrow d = -8$	$a_5 = -1$ $a_6 = -9$ $a_7 = -17$
4.) 4.1, 1.7, -0.7, ...	Yes	$\rightarrow d = -2.4$	$a_4 = -3.1$ $a_5 = -5.5$ $a_6 = -7.9$

II. Find the indicated term of each arithmetic sequence. Must show work for credit!

5.) $a_1 = 2$ and $d = 6$; find the 12 th term $a_{12} = 68$	6.) $a_1 = -10$ and $d = 2$; find the 28 th term $a_{28} = 44$	7.) Find a_{65} for sequence 12, 5, -2, ... $a_{65} = -436$	8.) Find a_{23} for sequence 4, 16, 28, ... $a_{23} = 268$
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III. Considering all given sequences are arithmetic – Find what is asked. SHOW WORK!!!

9.) If the forty-sixth term is 203 and the common difference is 4, then what is the first term? $a_1 = 23$	10.) If first term is 36 and the 52 nd term is 597 in a sequence, then what is the common difference? $d = 11$	11.) Which term of the sequence -15, -3, 9, ... is 417? 37 th term
12.) If 18 th term of the sequence is -105 and $d = -7$, then what is the sixth term? $a_6 = -21$	13.) The 23 rd term of a sequence is 103 and the 36 th term is 155. What is the first term of the sequence? $a_1 = 15$	14.) What is the n th term formula for sequence of 4, 12, 20, 28, ...? $a_n = 8n - 4$
15.) What are the three arithmetic means between 6 and 38? 14, 22, 30	16.) Is -50 a part of the following sequence: 17, 14, 11, ... ? Explain your answer. No - n is not a whole #	17.) If $a_1 = 5$ and $a_{31} = 185$, then what is the eleventh term of the sequence? $a_{11} = 65$
18.) The 42 nd term is -190 and the 34 th term is -150. What is the 26 th term of the sequence? $a_{26} = -110$	19.) What are the two arithmetic means between 16 and -2? 10, 4	20.) The sixteenth term is 117 and the seventeenth term is 124. What is the 21 st term of the sequence? $a_{21} = 152$