

Name: _____

Date: _____

CW # 2-1: Math IB SL - Chapter 1 Review for Test

50 points

- 2 In an arithmetic sequence, $u_6 = -5$ and $u_9 = -20$. Find S_{20} .

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- 4 For the geometric series $0.5 - 0.1 + 0.02 \dots$
 $S_n = 0.416$. Find the number of terms in the series.

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- 7 How many terms are in the sequence
 $4, 7, 10, \dots, 61$?

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- 8** In a geometric sequence, the fourth term is 8 times the first term. If the sum of the first 8 terms is 765, find the 9th term of the sequence.
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- 9** Three consecutive terms of a geometric sequence are $x - 3$, 6 and $x + 2$. Find all possible values of x .
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- 14** Using the binomial theorem, expand $(3x - y)^6$.

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22 P1: The 15th term of an arithmetic series is 143 and the 31st term is 183.

- a** Find the first term and the common difference.
- b** Find the 100th term of the series.

26 P1: The coefficient of x^2 in the binomial expansion of $(1+3x)^n$ is 495.

Determine the value of n .

32 P1: A ball is dropped from a vertical height of 20m.

Following each bounce, it rebounds to a vertical height of $\frac{5}{6}$ its previous height.

Assuming that the ball continues to bounce indefinitely, show that the maximum distance it can travel is 220m.