

Example 1

Consider the following arithmetic sequence:

$$2k - 1; k + 7; 5k - 5; \dots$$

- 1.1 Find the value of k .
- 1.2 Find the 1st three terms of the sequence.
- 1.3 Find T_n .

No	Solutions
1.1	$T_2 - T_1 = T_3 - T_2$ $(k + 7) - (2k - 1) = (5k - 5) - (k + 7)$ $k + 7 - 2k + 1 = 5k - 5 - k - 7$ $-k + 8 = 4k - 12$ $-5k = -20$ $k = 4$
1.2	<p>Now that we know the value of k, then we can substitute.</p> $= 2k - 1; k + 7; 5k - 5$ $= 2(4) - 1; 4 + 7; 5(4) - 5$ $= 8 - 1; 11; 20 - 5$ $= 7; 11; 15$
1.3	<p>When the value of $a = 7$ and $d = 4$ then</p> $T_n = a + (n - 1)d$ $T_n = 7 + (n - 1)(4)$ $T_n = 7 + 4n - 4$ $T_n = 3 + 4n$

HOMEWORK:

Consider the following sequence:

$$7; 3; -1; -5; \dots \dots \dots$$

- a) Find the n th term of the sequence.
- b) Find the 30th term.
- c) Which term is equal to -153 ?
- d) Calculate the sum of the first 50 terms of the sequence.

MEMORANDUM FOR THE HOMEWORK WILL BE SENT IN TOMORROW.

MEMORANDUM WILL BE POSTED IN TOMORROW MORNING.

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