Linear Sequence: Constant Differences

1. Write down the next 3 terms of each of the following sequences:
(a) 7, 11, 15, 19, 23, ...
(b) 1, 9, 17, 25, 33, ...

2. Write down the next 3 terms of each of the following sequences:
(a) 2, 5, 8, 11, 14, ...
(b) 9, 18, 27, 36, 45, ...
(c) 13, 14, 15, 16, 17, ...
(d) 7, 15, 23, 31, 39, ...

3. Write down the next 3 terms of each of the following sequences:
(a) 100, 98, 96, 94, 92, ...
(b) 20, 17, 14, 11, 8, ...
(c) 48, 43, 38, 33, 28, ...
(d) 17, 13, 9, 5, 1, ...

4. A sequence is defined by the formula $u_n = 6n - 2$:
(a) Calculate the first 5 terms of the sequence.
(b) What is the difference between the terms of the sequence?

5. A sequence is defined by the formula $u_n = 8n + 2$.
(a) Calculate the first 5 terms of the sequence.
(b) What is the difference between the terms of the sequence?
(c) Write down the next 3 terms of the sequence.

6. A sequence is given by $u_n = 7n - 3$.
(a) Calculate the first 4 terms of the sequence.
(b) What is the difference between the terms of the sequence?

7. A sequence is given by the formula $u_n = 11n - 7$.
(a) What would you expect to be the difference between
     the terms of the sequence?
(b) Calculate the first 4 terms of the sequence and check your
     answer to part (a).
(c) Calculate the 10th term of the sequence.

Linear Sequence: Constant Differences

1. Write down the next 3 terms of each of the following sequences:
(a) 7, 11, 15, 19, 23, 27, 31, 35
(b) 1, 9, 17, 25, 33, 41, 49, 57

2. Write down the next 3 terms of each of the following sequences:
(a) 2, 5, 8, 11, 14, 17, 20, 23
(b) 9, 18, 27, 36, 45, 54, 63, 72
(c) 13, 14, 15, 16, 17, 18, 19, 20
(d) 7, 15, 23, 31, 39, 47, 55, 63

3. Write down the next 3 terms of each of the following sequences:
(a) 100, 98, 96, 94, 92, 90, 88, 86
(b) 20, 17, 14, 11, 8, 5, 2, −1
(c) 48, 43, 38, 33, 28, 23, 18, 13
(d) 17, 13, 9, 5, 1, −3, −7, −11

4. A sequence is defined by the formula $u_n = 6n - 2$:
(a) Calculate the first 5 terms of the sequence. 4, 10, 16, 22, 28
(b) What is the difference between the terms of the sequence? 6

5. A sequence is defined by the formula $u_n = 8n + 2$.
(a) Calculate the first 5 terms of the sequence. 10, 18, 24, 36, 42
(b) What is the difference between the terms of the sequence? 8
(c) Write down the next 3 terms of the sequence. 50, 58, 66

6. A sequence is given by $u_n = 7n - 3$.
(a) Calculate the first 4 terms of the sequence. 4, 11, 18, 25
(b) What is the difference between the terms of the sequence? 7
The first difference 7 is the multiple of n in the formula

7. A sequence is given by the formula $u_n = 11n - 7$.
(a) What would you expect to be the difference between
the terms of the sequence? 11
(b) Calculate the first 4 terms of the sequence and check your
answer to part (a). 4, 15, 26, 37
(c) Calculate the 10th term of the sequence. 103