

More Practice: Arithmetic Sequences

KEY

What are the next 3 terms in the sequence and find the common difference for the sequence:

1.  $6, 15, 24, \underline{33}, \underline{42}, \underline{51}$       Common difference =  $9$   
 $\xrightarrow{+9}$   $\xrightarrow{+9}$
2.  $8.5, 9.3, 10.1, \underline{10.9}, \underline{11.7}, \underline{12.5}$       Common difference =  $0.8$   
 $\xrightarrow{+0.8}$   $\xrightarrow{+0.8}$
3.  $54, 42, 30, \underline{18}, \underline{6}, \underline{-6}$       Common difference =  $-12$

Write the first four terms of the given sequence:

4.  $a_n = 7 + 3(n - 1)$        $7, 10, 13, 16$
5.  $a_n = 11 - 2(n - 1)$        $11, 9, 7, 5$
6.  $a_n = 5 + (n - 1)$        $5, 6, 7, 8$

Write the first four terms of the arithmetic sequence with the given bits:

7.  $a_1 = 8, d = -2$        $8, 6, 4, 2$
8.  $a_1 = 4, d = 3$        $4, 7, 10, 13$
9.  $a_2 = 5, a_5 = 29$        $5, \quad \quad \quad 29$        $5 + 3d = 29$        $-3, 5, 13, 21$   
 $\xrightarrow{+d}$   $\xrightarrow{+d}$   $\xrightarrow{+d}$   
 $\xleftarrow{-d}$   
 $3d = 24$   
 $d = 8$

Write the explicit formula for the given sequences:

10.  $4, 11, 18, \dots$        $a_n = 4 + 7(n - 1)$   
 $\xrightarrow{+7}$
11.  $8.1, 8.4, 8.7, \dots$        $a_n = 8.1 + 0.3(n - 1)$   
 $\xrightarrow{+0.3}$
12.  $5, 1, -3, \dots$        $a_n = 5 - 4(n - 1)$   
 $\xrightarrow{-4}$