

Write the first three terms of the sequence.

1. $a_n = 2n^2 - 3n + 4$

$$3, 6, 13$$

2. $a_n = 3^n + 4$

$$= 7, 13, 31$$

3. $a_n = 100 \log_5 n$

$$0, 43.1, 68.3$$

4. $a_n = \frac{n}{n+3} - 3$

$$-2.75, -2.6, -2.5$$

5. Find the 31st term of the sequence $a_n = \left(\frac{5}{2}\right)^{\frac{n}{2}-1}$.

$$a_{31} = \left(\frac{5}{2}\right)^{\frac{31}{2}-1} = \left(\frac{5}{2}\right)^{14.5} = 589,020.1144$$

6. Find the 49th term of the sequence $a_n = 40 - 2(n-1)$.

$$a_{49} = 40 - 2(49-1) = -56$$

7. If $a_n = 305$ and it belongs in a sequence with general form $a_n = 17 + 3(n-1)$, solve for n.

$$305 = 17 + 3(n-1)$$

$$n = 97$$

8. If $a_n = 19,131,876$ and it belongs in a sequence with general form $a_n = 4(3)^{n-1}$, solve for n.

$$19,131,876 = 4(3)^{n-1}$$

$$4,782,969 = 3^{n-1}$$

$$\log_3 4,782,969 = n-1$$

$$n = 15$$

