Arithmetic Sequences

To find the nth term of an Arithmetic Sequence, use the formula

$$a_n = a_1 + (n - 1)d$$

Determine if the following are arithmetic sequences. If it is arithmetic, write an equation describing the sequence.

1. **2, 4, 6, 8, …**

2. **13, 9, 5, 1, …**

3. **2, 4, 8, 16, …**

Find the nth term of the following sequences.

4. **3, 8, 13, 18, … Find the 21st term.**

5. **4, 10, 16, 22, … Find the 11th term.**

6. **10, 7, 4, 1, … Find the 31st term.**

7. **5, 9, 13, 17, … Find the 101st term.**

8. **8, 7.5, 7, 6.5, … Find the 9th term.**

9. **10, 2, –6, –14, …Find the next three terms of the sequence.**

10. **Explain why the sequence 7, 9, 12, 16, … is not an arithmetic sequence.**