

PreQuiz: I can model arithmetic sequences

Arithmetic sequences

Terms: $u_n = u_1 + d(n - 1)$

Sum: $S_n = \frac{n}{2}(u_1 + u_n)$

1. In an arithmetic sequence the first term is -5 and the fourth term is 4 .

(a) Find the common difference d .

(b) Find the eighth term, u_8 .

(c) Find the sum of the first eight terms.

2. The second term of an arithmetic sequence is 22 and the seventh term is 2 .

(a) Find the common difference d .

(b) Find the first term, u_1 .

(c) Find the sum of the first seven terms.

3. The rate on a credit card is 18% per annum. Find the total amount due on a \$650 purchase after one month (principal and interest).
4. Robert takes out a 5 month loan to purchase and repair a used car for resale. The principal amount is 12,000 euros and interest rate is 9.50% per annum. Find the interest Robert pays.
5. The height of a plant h in centimeters over a period of time t measured in weeks is shown in the table. [3]
- (a) Plot the data as points on the grid.
- (b) Draw a line of best fit on the graph.

t	h
1	1
2	3
3	4
5	5

