

Section 9.2 Arithmetic Sequences

arithmetic sequence: a sequence where the difference between consecutive terms is constant. This difference is called the **common difference**.

arithmetic mean: average

Problem 1:

Is the sequence an arithmetic sequence?

a. 12, 22, 32, 42, 52,...

b. 1, 1, 2, 3, 5,...

Problem 2:

What are the indicated terms of the arithmetic sequence?

a. the 110th term of the sequence that begins 5, 9, ...

b. the second and the third terms of the sequence 90, ____, ____, 12, ...?

Problem 3:

What is the missing term of the arithmetic sequence ..., 35, ____, 53, ...?

Problem 4:

Over the last ten years, the amount of snow a town received formed an arithmetic sequence. If 21 inches of snow fell 10 years ago and 19 inches fell 9 years ago, how many inches fell 2 years ago?

Problem 5:

Write an explicit and a recursive formula for the sequence.

a. -32, -20, -8, 4, 16, ...

b. 27, 18, 9, 0, -9, ...

Problem 6:

Find the missing terms of the arithmetic sequence $1, a_2, a_3, a_4, -35, \dots$

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