Number Sequences

Young learners (beginning primary school) need to practice their numeracy skills, and one technique that is used is to give the learner a few terms of a simple numerical series, and he or she must guess the next three.

For example, the series:

1 4 7 10 \_\_\_ \_\_\_ \_\_\_

Requires the answers 13, 16, and 19. The numbers increase by three each time.

Write a computer program that will create a series, then allow the user to put in the three missing terms. The scoring can be done as follows: One point for each correct term the user gives.

You can use the random number generator to:

1. Pick the first term of the series.
2. Pick the gap between numbers.

You can make the series more difficult by

* allowing are larger first number,
* Allowing a larger gap,
* Providing fewer terms.

Some ideas to incorporate:

1. Allow the program to increase in difficulty for each series that the user gets right.
2. Keep an “honours roll” of high scorers.
3. Allow users to select difficulty levels.
4. Complicate the series by using different math techniques: squares, cubes, alternating positive and neg numbers, decreasing series, etc.