## Sequence Puzzles

Try to find a simple rule for each of the following sequences, and give the next 3 terms. You should be able to answer at least 3 of these. How many can you get?

- (1) 11, 17, 23, 29, 35, 41, 47, 53, 59, 65, ...
- (2) 5, 10, 20, 40, 80, 160, 320, 640, 1280, 2560, . . .
- $(3) 0, 1, 3, 6, 10, 15, 21, 28, 36, 45, \dots$
- (4) 2, 5, 10, 17, 26, 37, 50, 65, 82, 101, ...
- (5) 4, 7, 13, 25, 49, 97, 193, 385, 769, 1537, ...
- $(6) 1, 1, 2, 4, 7, 13, 24, 44, 81, 149, \dots$
- $(7) 2, 3, 2, 5, 3, 7, 2, 3, 5, 11, 3, 13, 7, 5, \dots$
- $(8) 2, 1, 3, 2, 6, 5, 15, 14, 42, 41, \dots$
- $(9) \ \ 31, 1311, 111321, 31131211, 132113111221, 1113122113312211, 311311222123112221, \ldots$
- $(10) \ 5, 6, 9, 12, 13, 18, 21, 24, 27, 50, 55, 56, 59, 42, 43, 48, \dots$