**Generating Sequences**

For each of the sequences given, decide whether it is special, arithmetic, quadratic or geometric, then write down the next two terms.

(a) $1, 1, 2, 3, 5, 8,…$

(b) $4, 7, 10, 13,…$

(c) $2, 4, 8, 16,…$

(d) $10, 8, 6, 4, 2,…$

(e) $1, 3, 6, 10, 15,…$

(f) $160, 80, 40, 20,…$

(g) $2, 5, 10, 17,…$

(h) $1, 3, 5, 7, 9,…$

Generate the first four terms of the sequences with nth terms:

(a) $2n$ (b) $3n-1$

(c) $n^{2}$ (d) $20-n$

(e) $7-3n$ (f) $n^{2}+5n$

(g) $2n^{2}-1$ (h) $\frac{n(n+1)}{2}$

Generate the 6th and 20th terms of the sequences with nth terms:

(a) $4n-1$ (b) $n+10$

(c) $1+n^{2}$ (d) $50-5n$

(e) $-1-n$ (f) $n^{2}-2n$

(g) $3n^{2}+n+1$ (h) $\frac{n+1}{n+2}$

(a) Find the first term in the sequence with nth term $5n+7$ that is greater than 250.

(b) Find the first term in the sequence with nth term $150-8n$ that is a negative number.

(c) Find the only number that is in both the sequences with nth term rules $2n-9$ and $17-7n$.

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