Patterns and 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,...

(a) Special - Fibonacci, 13, 21

(b) Arithmetic 16, 19

(c) Geometric 32, 64

(d) Arithmetic 0, -2

(e) Special - Triangular 21, 28

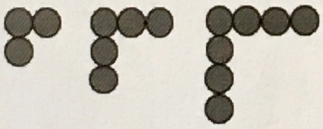
(f) Geometric - 10, 5

(g) Quadratic 26, 37

(h) Special - odd or Arithmetic 11, 13

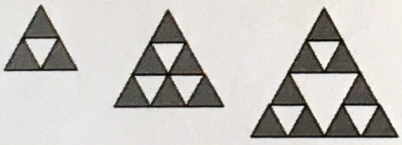
For each of these sequences, draw the next two patterns in the sequence.

(a)

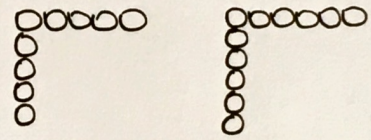


(b)

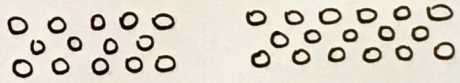
(c)



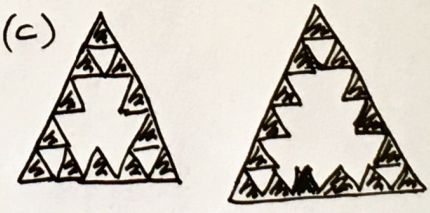
(a)



(b)



(c)



The first three terms of a Fibonacci sequence are:

$a \qquad b \qquad a + b$

Show that the 6th term is $3a + 5b$

1	2	3	4	5
a	b	a+b	a+2b	2a+3b

6th = 2a+3b+a+2b

= 3a+5b