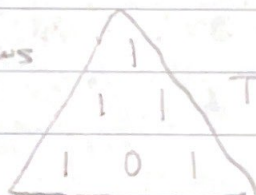


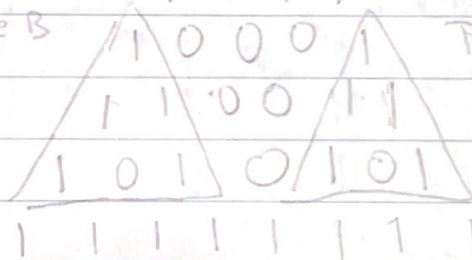
1
 1 1
 1 2 1
 1 3 3 1
 1 4 6 4 1
 1 5 10 10 5 1
 1 6 15 20 15 6 1
 1 7 21 35 35 21 7 1

Pascal mod 2 1st 5 rows



Triangle A

Triangle B



Triangle C

This is a fractal due to the self-similarity of Triangle A with Triangles B and C

2(i) 1st 10 terms:

$$\{0.5, 0.25, 0.1875, 0.152344, 0.129135, 0.112459, \\ 0.099812, 0.08985, 0.081777, 0.075089\}$$

This sequence tends to 0

2(ii) 1st 10 terms

$$\{0.5, 0.625, 0.585938, 0.606537, 0.596625, 0.601659, \\ 0.599164, 0.600416, 0.599791, 0.600104\}$$

This sequence tends to 0.6

2(iii) 1st 10 terms

$$\{0.5, 0.775, 0.540563, 0.7699, 0.549178, 0.767503, \\ 0.553171, 0.766236, 0.555267, 0.765531\}$$

This sequence oscillates between 0.77645 and 0.558014

2(iv) 1st 10 terms

$$\{0.5, 0.875, 0.382813, 0.826935, 0.500898, 0.874997, \\ 0.38282, 0.826941, 0.500884, 0.874997\}$$

This sequence oscillates between 0.38282, 0.500884, and 0.874997

3. Feigenbaum constant $\delta = \lim_{n \rightarrow \infty} \frac{a_{n-1} - a_{n-2}}{a_n - a_{n-1}}$