

Powers of 2

1, 2, 4, 8, 16, 32, 64, 128, 256, 1024,
2048, 4096, 8192, 16384, 32768, 65536,
131072, 262144, 524288, 1048576, ...

$$a(n) = 2^n.$$

If you placed one grain of rice on the first square of a chess board and doubled the number on each subsequent square, the last one would have

18,446,744,073,709,551,616 grains of rice on it!