

Answer on Question #77289 – Math – Combinatorics | Number Theory

Question

A theater has 20 rows of seats. There are 15 seats in the first row, 17 seats in the second row, and each successive row of seats has two more seats in it than previous row

a) Calculate the number of seats in the 20th row.

b) calculate the total number of seats

Solution

a) $n_{20} = n_1 + (20 - 1) * 2 = 15 + 19 * 2 = 53.$

b) $N_{20} = \frac{n_1+n_{20}}{2} * 20 = \frac{15+53}{2} * 20 = 680.$

Answer: a) 53; b) 680.