

Find the sum of all natural numbers between 1 and 100, which are divisible by 3.

Solution.

Use the formula of the sum of the first n terms of arithmetical progression $\{a_n\}_{n=1}^{+\infty}$:

$$S_n = \frac{a_1 + a_n}{2} \cdot n.$$

$$3 + 6 + \dots + 99 = 3 \cdot (1 + 2 + \dots + 33) = 3 \cdot \frac{1+33}{2} \cdot 33 = 3 \cdot 17 \cdot 33 = 1683.$$

Answer.

1683