

Answer on Question #37622, Math, Geometry

Calculate the geometric mean from the following table

Marks obtained 11 12 13 14 15

No of students 3 7 8 5 2

Answer:

The geometric mean of a data set $\{a_1, a_2, \dots, a_n\}$ is given by:

$$m_g = \left(\prod_{i=1}^n a_i \right)^{\frac{1}{n}} = \sqrt[n]{a_1 a_2 \dots a_n}$$

We have total number of students n:

$$n = 3 + 7 + 8 + 5 + 2 = 25$$

For our data geometric mean equals:

$$m_g = \sqrt[25]{11^3 12^7 13^8 14^5 15^2} \cong 12.79$$

Answer: 12.79