

Answer on Question #62126, Physics / Other

A sheet of card has a length of 297mm, a width of 210mm and a mass of 25.2 grams. A student cut a 297mm strip of even width from the card. The mass of this strip was 5.6 grams. Calculate the ratio of the mass of the strip to the mass of the original card.

Solution:

In mathematics, a ratio is a relationship between two numbers indicating how many times the first number contains the second.

The ratio of the mass of the strip to the mass of the original card is

$$\frac{m_{strip}}{M_{card}} = \frac{(5.6 \text{ g})}{(25.2 \text{ g})} = \frac{5.6 : 5.6}{25.2 : 5.6} = 1 : 4.5 = \frac{1}{4.5} = 0.222$$

Answer: 1:4.5 = 0.222