

Answer on Question #60195 – Math – Algebra

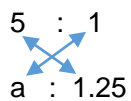
Question

You receive a prescription for a drug to be given in a dose of 5 mg/m². Calculate the dose of the drug for a patient with a BSA of 1.25m². Solve the problem using both ratio and proportion and dimensional analysis.

Solution

Method 1

Ratio and proportion

$$\begin{array}{l} 5 : 1 \\ a : 1.25 \end{array}$$


$$5 \times 1.25 = a \times 1$$

$$a = 5 \times 1.25 \div 1 = 6.25 \text{ (mg).}$$

Method 2

Dimensional analysis

$$1 \text{ dose} \times \frac{5 \text{ mg}}{1 \text{ m}^2} \times \frac{1.25 \text{ m}^2}{\text{dose}} = 6.25 \text{ mg}$$

Answer: 6.25 mg.