



Math Study Strategies

Nursing Math

Parenteral Drugs (example 3)



You are to administer Vistaril to a 5-year old child weighing 45 pounds. The order (dose) is 0.5mg/lb, but your vial is labeled 50mg per 2cc. How many cc's of Vistaril should you give the child?

$$\frac{0.5\text{mg}}{1\text{lb.}} \times \frac{45\text{lb.}}{1} \times \frac{2\text{cc}}{50\text{mg}} = 0.9\text{cc}$$

↑
↑
↑

order
weight of child
labeling on vial

remember that "per" means division

Step 1

Start with the **factor** that has the unit that you need in the answer. The problem is asking for cc's, so we will start with "**50mg per 2cc.**"

Step 2

Place similar units that are not in the final answer **diagonally** from each other so that the **units** will cancel. The units that are not in the answer in this problem are "**mg**" and "**lb**", so arrange these diagonally

$$\frac{2\text{cc}}{50\text{mg}} \times \frac{0.5\text{mg}}{1\text{lb.}} \times \frac{45\text{lb.}}{1}$$

Step 3

Cancel diagonal units, compute the numbers, and carry uncanceled units to the answer.

uncanceled unit

$$\frac{2\text{cc}}{50\text{mg}} \times \frac{0.5\text{mg}}{1\text{lb.}} \times \frac{45\text{lb.}}{1} = 0.9\text{cc}$$