



Math Study Strategies

Nursing Math

Parenteral Drugs (example 1)



You are to administer 1/4g of 1M morphine sulfate. Your ampule is labeled 1/8g per ml. How many milliliters of morphine sulfate will you administer?

Step 1

Find the factor that has the unit needed in the answer.

- ▶ The unit of the answer is milliliters (ml). The ampule is labeled 1/8g per ml.

What is needed in the answer.

Step 2

Place similar units diagonally from each other.

- ▶ From the information given in the problem, grams are the similar units.

$$\frac{1\text{ml}}{1/8\text{g}} \quad \times \quad 1/4\text{g}$$

Step 3

Cancel out diagonally all of the units not needed in the answer.

- ▶ We want only ml in the final answer, so cancel out the grams (g).

$$\frac{1\text{ml}}{1/8\cancel{\text{g}}} \quad \times \quad 1/4\cancel{\text{g}}$$

Step 4

After canceling out all unwanted units, multiply across to obtain your answer.

$$\frac{1\text{ml}}{1/8} \quad \times \quad 1/4 \quad = \quad 8\text{ml} \times 1/4 = \mathbf{2\text{ml}}$$