



ST. JOSEPH'S COLLEGE OF NURSING
at St. Joseph's Hospital Health Center
Syracuse, NY

SJCON: Guidelines for Answering Medication Math Questions

Rules for Rounding Medication Math Calculations (included in the stem of the question):

1. For numbers greater than 1, carry out to the hundredths place (2 places after the decimal) and round to the nearest tenth (mL, mg, kg, etc.) Examples:
 - 5.67 kg is rounded to 5.7 kg
 - 5.21mL is rounded to 5.2 mL
 - 45.16 mg is rounded to 45.2 mg
2. For numbers less than 1, carry out to the thousandths place (3 places after the decimal) and round to the nearest hundredth (mL, mg, kg, etc.). Examples:
 - 0.823 mL is rounded to 0.82 mL
 - 0.688 mg is rounded to 0.69 mg
3. For medication math testing purposes, Maintenance Intravenous rates (mL/hr and gtt (drops)/min) are rounded to the nearest whole number.* Examples:
 - 85.5 mL is rounded to 86 mL
 - 31.2 gtt (drops) is rounded to 31 gtt/min

*Medication drip calculations – directions for rounding will be included in the stem of the question.

4. When weight is included in the question round the weight to the nearest tenth and then calculate, otherwise all other rounding is completed at the end.
 - Pounds to kilograms, divide by 2.2
 - Kilograms to pounds, multiply by 2.2

5. The above are general rounding rules. In a medication math test, the question will include how and when to round the weight and the final answer.

Use of the Zero

For answers less than 1 place a zero before the decimal point. This is a medication safety issue.

Correct: 0.6 mL

Incorrect: .6mL (the point 6 can be misinterpreted as 6 ml)

There are no trailing zeros when indicating numbers greater than 1.

Correct: 5mL

Incorrect: 5.0mL This could be misinterpreted as 50 mL therefore never place a trailing zero after the decimal point.

Labeling answers

When solving for a particular unit of measure, the answer must be labeled in that unit of measure. Example: “mL”: when solving for the number of milliliters (“mL”) to administer, the answer must be labeled as “mL”, example: “0.5 mL”

If the required answer is mis-labeled as 0.5mg/mL, mg/hr or mg, the answer is incorrect.

*Remember the answer should reflect the measurement being sought. Milliliters and milligrams are not interchangeable, for example.

Refer to a medication math textbook for practice problems and examples.

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