NR 226: MED Calculation and Sample Questions

YOU MUST KNOW THE CONVERSION TABLES BEFORE STARTING TO PRACTICE

Cardinal Rules

1. ALWAYS omit terminal zeros. Answer containing terminal zeros violate patient safety standards, and will be graded as an incorrect notation.

For example 12.50 must be written as 12.5 in order to be considered appropriate notation.

2. If the answer is less than 1,with no whole number before the decimal point, ALWAYS place a zero in front of the decimal. This is a safety issue. An answer on the test not preceded by a zero as appropriate will be graded as an incorrect notation.

For example, .7 must be written as 0.7 in order to be considered appropriate notation.

3. Round all answers to medication problems to the nearest tenth. Kilogram weights should be rounded immediately, before proceeding with the problem. Otherwise, don't round until you get to the final answer.

Answers that are not correctly rounded to the nearest tenth are graded as incorrect.

For example, 3.25 is rounded to 3.3.

I.V. flow problems are rounded to the nearest whole drop.

For example, 33.3 is rounded to 33 gtts/drops.

CONVERSION TABLE

1. 1 kilogram (kg) = 1000 grams (g)

2. 1 gram (g) = 1000 milligrams (mg) Convert Grams to Milligrams by Multiplying grams by 1,000 Convert Milligrams to grams by dividing milligrams by 1,000

1 milligram (mg) = 1000 micrograms (mcg)

Grains (gr.) 15 = 1 Gram (g) or 1000 milligrams (mg)

To convert gram. to grain multiply by 15

To convert grain to gram divide by 15.

1 Grain (gr.) = 60 Milligrams (mg)

To convert gr. to mg multiply gr. by 60

To convert mg to gr. divide mg. by 60

1 ml = 1 cc

1 ounce = 30 ml

1 tablespoon (T or tbsp) = 15 ml

1 teaspoon (t or tsp) = 5 ml

2.2 lbs. = 1 kg

To convert pounds to kg divide pounds by 2.2

To convert kg to pounds multiply by 2.2

Know the formula: D/H x QD

D = Desired Dose

Q = Quantity of Solution

H = Strength on Hand

X = Unknown quantity of Drug

SAMPLE QUESTION

1. Physician orders 500 mg of ibuprofen (desired Dose) for a patient and you have 250 mg (Quantity on Hand) tablets (Quantity of solution) on hand.

Solution:

D ÷ H x Q = X 500mg ÷ 250 mg x 1 tablet = 2 tablets

Answer: 2 tablets.

2. Physician orders 1500 mg of liquid ibuprofen for a patient. Quantity of Ibuprofen is 500 mg in 1 cc, how much will you administer?

Solution:

1500 mg ÷ 500 mg x 1cc = 3 cc

Answer: 3 cc

3. **Dosage and Conversions**

MD orders 300 mg of Ibuprophen to be taken by a 6 kg infant every 4 hours. Label shows 75 – 150 mg/kg per day. Is the physician's order within normal range?

Solution:

6 x 75 = 450 mg (minimum dosage per day);

150 X 6 = 900 (maximum dosage per day)

1 day = 24 hours therefore,

24 ÷ 4 = 6 dosages

300 x 6 = 1800

Answer: Dosage is not within range