

## **MATHEMATIC RULES FOR NUR 1142**

### **1. Basic Math Rules:**

- a. Fractions and ratios are reduced to their lowest terms  $3:6 = 1:2$
- b. Improper fractions are changed to mixed numbers.
- c. Answers are never left as improper fractions. EX:  $3/2 = 1 \frac{1}{2}$ ,  
 $2/4 = 1/2$ .
- d. During division of decimals carry out the quotient to hundredths, (two spaces beyond the decimal) if it is greater than one (has a whole number) and to thousandths (three spaces beyond the decimal) if it is less than one (has no whole number). Do not round off decimals during the problem.
- e. The final answer should be rounded to tenths (one space beyond the decimal) if it is 1 or greater (has a whole number) and to hundredths (two spaces beyond the decimal) if it is less than one (has no whole number).

### **Leading and trailing zero's**

#### **Errors are made when the decimal point is missed.**

- f. A decimal number that is less than 1 is written with a leading zero- for example, 0.3 and 0.0025
- g. There should be no trailing zero (3.0 mg) when the answer is a whole number. Please write 3 mg.

### **2. Equivalents and abbreviations rule.**

- a. Only the approved list of equivalents will be accepted.
- b. Only the approved list of abbreviations will be accepted.

### **3. The Metric System:**

- a. Final answers in the metric system are expressed in Arabic numbers and decimals. No fractions are used.
- b. The final answer for quantities greater than one is expressed in tenths. The final answer for quantities less

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than one is expressed in hundredths. EX:  $0.043 = 0.04$  (as the final answer),  $1.27 = 1.3$  (as the final answer).

- c. The notation (abbreviation) is written after the number.  
EX: 2.5 mg.

### **4. The Household System:**

- a. Answers in the household system are expressed in Arabic numbers and fractions. Decimals are never used. Roman numerals are never used.
- b. The notation (abbreviation) comes after the number. EX: 2 tsp, 2 ½ Tbsp, 6 oz.
- c. Always reduce fractions to their lowest terms.

### **5. Fahrenheit and Celsius are expressed in decimals and the same rules apply as in the metric system.**

### **6. Pounds are expressed in decimals and the same rules apply as in the metric system.**

### **7. Inches are expressed in decimals and the same rules apply as in the metric system.**

### **8. Time:**

- a. Time is expressed in hours and minutes. It will be necessary to convert parts of an hour to minutes.
- b. Minutes are rounded to the nearest whole minute. Minutes may be rounded to the nearest whole minute before the end of the problem. This is the **only** time rounding is done before the end of the problem.
- c. Time is expressed in standard time or military time according to the directions in the problem.

### **9. Dosage Problems**

- a. Tablets, pills and capsules:
  - i. Tablets are considered to be scored in halves and are given in whole and ½ tablets.
  - ii. Pills and capsules cannot be divided and are given in whole numbers.

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- iii. Numbers of tablets, pills and capsules are written in arabic numbers and fractions. Decimals and Roman numerals are never used.
  - iv. Reduce all fractions to their lowest terms.
  - v. The abbreviations for tablets, capsules, and pills come after the number. EX: 1 ½ tab, 3 pills.
- b. Powders are usually measured in the household system and those rules apply. EX: 1 tsp., 2 ½ Tbsp.
- c. Liquids may be measured in the metric or household systems. The final answer is written according to which system the label on the answer belongs. EX: 1 tsp, 3.5 ml.
- d. Write your final answer correctly according to the system of measurement in which the answer is expressed. The label on the answer indicates the form of the answer.
- e. Remember, all problems are worked without rounding off until the final answer. No rounding off is done until the end of the problem. Instructions for how far to carry out problems in decimals are given in the rule 1 part d. The final answer is the one placed on the answer sheet. Rounding off before this is too soon.

### **10. IV'S**

**Drops (gtt) are rounded to the nearest whole number.**

- a. Minutes and drops (gtt) are rounded to whole numbers. Minutes may be rounded off before the final answer. This is the only exception to that rule.
- b. All other answers are rounded and labeled according to the system in which they are expressed.