

## MATH SCREENING EXAM

### DIRECTIONS

1. Print legibly and clearly.
2. Print your name, today's test date and the letter of the test you are taking on your answer sheet and test booklet.
3. Your final answer must appear on the answer sheet. Answers not found on the answer sheet will be marked as incorrect.
4. All work is to be done in the test booklet.
5. Reduce fractions to lowest terms.

## MATH SCREENING FOR NURSING PROGRAM

### SAMPLE PROBLEMS FOR THE SCREENING TEST

Concert tickets are on sale for \$64. There is a ticketron charge of 5% on each ticket purchased. What is the total cost of each concert ticket? Hint: remember to obtain the 5% of the ticket for the ticketron charge and add that amount to the cost of each ticket.

Answer \$67.20 for each concert ticket

What would it cost for five (5) concert tickets? Ten (10)? Hint: remember to multiply the cost of the ticket \$64 plus the ticketron charge \$3.20, which would then come to \$67.20 for each ticket. For the cost of 5 tickets you must multiply by 5. The total would be \$336. The cost for ten tickets would be 10 times \$67.20 for a total of \$672.

Peaches are on sale for 5 pounds for \$6. How much would 8 pounds cost? Hint: first find out how much each pound costs by dividing the total cost of \$6 by the number of pounds to find out how much each pound costs. Each pound costs \$1.20. Then multiply the number of pounds by the cost per pound. \$1.20 times 8 equals \$9.60

One gallon of gasoline costs \$1.89. How much would it cost to purchase 10 gallons? Hint: remember to move the decimal one place to the right. The cost for the 10 gallons of gasoline would be \$18.90. \$1.89 times 10 is \$18.90.

How many 8-ounce glasses would you have to drink, to drink a total of two quarts of water? Hint: one quart contains 32 ounces multiply 32 times 2 which is 64. There are 64 ounces in 2 quarts. Now divide 64 by 8. The answer is 8. You would have to drink eight 8 ounce glasses to drink the required 64 ounces of fluid.

How many pounds of meat will be needed to serve 15 people a quarter of a pound of meat each? Hint: A quarter is equal to 25% or .25. Multiply .25 X 15, your answer is 3.75. or  $\frac{1}{4} \times 15 = \frac{15}{4}$  or 3.75 pounds of meat.

### **Decimals:**

**Multiplication of decimals:** count the total number of decimal places in the numbers multiplied. Be sure to count the same number of decimal places in the answer and place the decimal point.

Multiplication of decimals:

Example: Multiply and round off your answer to two decimal places

$$0.35 \times 0.5 = 0.175 \text{ Your answer would be } 0.18.$$

You must remember to round off to two decimal places as instructed.

Example  $1.4 \times 0.25$

Your answer 0.35

Multiply the following:

$$0.45 \times 0.2$$

Answer 0.09

$$0.7 \times 0.05$$

Answer 0.035 rounded off would be 0.04

Make sure decimal points are lined up correctly when adding or subtracting decimals.

### **Addition of Decimals:**

$$0.25 + 0.5 = \text{answer } 0.75$$

$$3.7 + 2.1 = \text{answer } 5.8$$

$$0.1 + 2.25 = \text{answer } 2.35$$

$$7.4 + 1.6 = \text{answer } 9$$

### **Subtraction of decimals**

$$1.25 - 1.125 = \text{answer } 0.125 \text{ rounded to two places would be } .13$$

$$7.33 - 4.04 = \text{answer } 3.29$$

### **Division of Decimals:**

If there is a decimal point in the divisor, move the decimal point to make the divisor a whole number. Then move the decimal point in the dividend the same number of decimal places. Place the decimal point in the answer in the same place as in the dividend.

$$63.792 \div 0.9 = \text{answer } 70.88 \quad 10 \div .05 \text{ answer } 200$$

$$98.4 \div 1000 = \text{answer } 0.0984 \text{ rounded to two places would be } .10$$

### **Fractions:**

Check the denominators before adding and subtracting.

If they are different, find the lowest common denominator.

Multiplication of fractions, multiply the numerators, multiply the denominators

Division of fractions—remember to invert the second fraction. And then multiply.

Change all mixed numbers to improper fractions before working on the problem

Reduce all fractions to their lowest terms.

### **Percentages:**

Percent sign % means the number divided by 100.

$$\text{Example: } 90\% = \frac{90}{100} = \frac{9}{10} \text{ or } .90$$

### **Ratio and Proportion:**

**A ratio is composed of two numbers which are somehow related to each other.**

**These numbers are separated by a colon. A true proportion consists of two ratios separated by an equal sign or double colon:: which indicates that the two ratios are equal. In a true proportion the product of the means equals the product of the extremes.**

**Example:**

$$1 : 50 = 2 : 100$$

$$2 \times 50 = 1 \times 100$$

$$100 = 100$$

Multiply the means

Multiply the extremes

Set up the equation in this example:  $1 : 4 = 3 : 12$

$$4 \times 3 = 1 \times 12$$

$$1:3::x:6 \quad \text{your answer} \quad 3x = 6 \quad x = 2$$

### **More sample questions:**

$$3.6 \div 0.04 = 90$$

$$5.47 \times 1000 = 5470$$

$$0.48 \div 10 = .048 \text{ rounded to two decimal places would be } .05$$

$$15 \times (4/9) = 6.666 \text{ or } 6.67 \text{ when you round it off to two decimal places}$$

$$(5/6) \div (2/9) = (5/6) \times (9/2) = (45/12) = 3.75$$

$$\text{Convert to decimals: } \frac{7.5}{50} = .15$$

$$38\% = 0.38$$

$$9\% = 0.09$$