

# SAMPLE MATH/COMPREHENSIVE TEST

## Note to Applicant:

This is a sample math test that is very similar to the math test that is given to an applicant as part of the "application process" for entrance to the Steamfitters' LU 602 Apprenticeship Program.

After reviewing the information included in this packet, you may wish to go over the sample test to become familiar with the questions, prior to making application to the school.

## ADDITION

$$\begin{array}{r} 1.) \quad 571 \\ \quad 210 \\ \quad 107 \\ + \quad 11 \\ \hline \end{array}$$

$$\begin{array}{r} 2.) \quad 375 \\ \quad 948 \\ \quad 22 \\ + \quad 659 \\ \hline \end{array}$$

## SUBTRACTION

$$\begin{array}{r} 3.) \quad 52495 \\ \quad - 1241 \\ \hline \end{array}$$

$$\begin{array}{r} 4.) \quad 658 \\ \quad - 395 \\ \hline \end{array}$$

## MULTIPLICATION

$$\begin{array}{r} 5.) \quad 648 \\ \quad \times 2.4 \\ \hline \end{array}$$

$$\begin{array}{r} 6.) \quad 37.28 \\ \quad \times .92 \\ \hline \end{array}$$

MULTIPLICATION

$$\begin{array}{r} 7.) \quad .576 \\ \times \quad .05 \\ \hline \end{array}$$

$$\begin{array}{r} 8.) \quad 2.035 \\ \times \quad 785 \\ \hline \end{array}$$

DIVISION – CARRY TO THE HUNDREDTH

$$9.) \quad 3 \overline{) 3912.00}$$

$$10.) \quad 220 \overline{) 2425.00}$$

DIVISION – ANSWER IN FEET AND INCHES. NO FRACTIONS OR DECIMALS.

$$11.) \quad 8 \overline{) 34 \text{ ft. } 8 \text{ in.}}$$

DIVISION-ANSWER IN GALLONS AND QUARTS. NO FRACTIONS OR DECIMALS.

$$12.) \quad 3 \overline{) 10 \text{ gallons } 11 \text{ quarts}}$$

1 gallon = 4 quarts

WRITTEN PROBLEMS

13.) At \$8.07 per hour, how much money will you earn in 40 hours?

Answer:

14.) One meter is equal to 3.28 feet. How many feet are there in 30 meters?

Answer:

15.) If one kilometer is equivalent to .6 miles, how many kilometers would you have traveled in going 42 miles?

Answer:

16.) A British thermal Unit (BTU) is the amount of heat required to raise 1 pound of water 1 degree Fahrenheit. How many BTU's would be required to raise 45 pounds of water 18 degrees Fahrenheit?

Answer:

17.) A column of water 2.31 feet high exerts a pressure of 1 pound per square inch. How much pressure does a column of water 47 feet high exert?

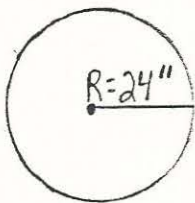
Answer:

18.) In figure #1, what is the circumference of the circle?

$$\pi = 3.14$$

$$\text{Circumference} = \pi \times \text{diameter}$$

Figure #1



Answer:

- 19.) What is the area of the circle in figure #1?  
Area =  $\pi \times R^2$

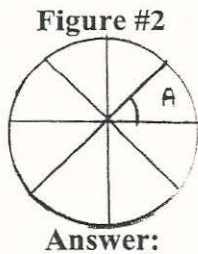
Answer:

- 20.) Find the value of "X" in the equation.

$$6X - 52 = 4X + 40$$

Answer:

- 21.) The circle in (figure #2) is divided into 8 equal parts. What is the angle of the section marked A?



- 22.) Find the value of "X" in the equation  $5X + 20 = 4X + 30$ .

Answer:

- 23.) Find the value of "X" in the equation  
 $X - 40 = 60$

ADDITION

$$24.) \quad 6 \frac{5}{32}$$

$$+ \quad 7 \frac{1}{8}$$

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$$25.) \quad 13 \frac{1}{8}$$

$$+ \quad 6 \frac{1}{2}$$

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SUBTRACTION

$$26.) \quad 5 \frac{3}{8}$$

$$- \quad 3 \frac{3}{4}$$

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$$27.) \quad 19$$

$$- \quad 5 \frac{5}{32}$$

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MULTIPLICATION

$$28.) \quad \frac{1}{4} \times 28 =$$

$$29.) \quad 4 \frac{3}{4} \times \frac{1}{2} =$$

DIVISION

$$30.) \quad 32 \div \frac{3}{8} =$$

$$31.) \quad \frac{3}{4} \div \frac{1}{4} =$$

ADDITION

$$\begin{array}{r} 32.) \quad 4.2015 \\ \quad \quad .6280 \\ + \quad 14.5215 \\ \hline \end{array}$$

$$\begin{array}{r} 33.) \quad .850 \\ \quad \quad 33.950 \\ + \quad 26.751 \\ \hline \end{array}$$

SUBTRACTION

$$\begin{array}{r} 34.) \quad 72.645 \\ - \quad \quad 3.999 \\ \hline \end{array}$$

$$\begin{array}{r} 35.) \quad 762.95 \\ - \quad 431.26 \\ \hline \end{array}$$

MULTIPLY

$$\begin{array}{r} 36.) \quad 62.92 \\ \quad \times \quad .544 \\ \hline \end{array}$$

$$\begin{array}{r} 37.) \quad 27.924 \\ \quad \times \quad .28 \\ \hline \end{array}$$

$$\begin{array}{r} 38.) \quad .426 \\ \quad \times \quad 200 \\ \hline \end{array}$$

DIVIDE - CARRY TO THE THOUSANDTH

$$39.) \quad .20 \overline{) 8.240}$$

$$40.) \quad 6.2 \overline{) 28.7250}$$

EXPRESS AS A PERCENTAGE

41.)  $.25 = \underline{\hspace{1cm}} \%$

$.46 = \underline{\hspace{1cm}} \%$

**EXPRESS IN DECIMAL FORM**

42.) 35% = \_\_\_\_\_

225% = \_\_\_\_\_

**FIND THE VALUES OF:**

43.) 25% of 250 =

.25% of 300 =

**FIND THE MISSING PERCENTS**

44.) 40 = \_\_\_\_\_ % of 50

2 = \_\_\_\_\_ % of 50

**WRITTEN PROBLEMS**

45.) What is the interest on \$38,925.00 for 1 year at 5 ½ percent interest?

**Answer:**

46.) Using the formula Fahrenheit =  $(9/5 C) + 32$ , what is the Fahrenheit temperature of a liquid with a centigrade temperature of 80 degrees?

**Answer:**



- 47.) Using the formula  $A/B = C/D$  find the value of A when  
D = 4,          C = 6          B = 8

Answer:

- 48.) The specific weight of an object can be found using the formula:  
Specific Weight =  $\frac{A}{C - W}$

What is the specific weight of an object when  
A = 25          C = 6.25          W = 3.75

Answer:

- 49.) What is the smallest unit of measurement shown on the ruler pictured below?

Answer:

- 50.) What is the measurement shown by bracket #1?

Answer:

