

**Plumbers & Steamfitters L.U. #486
Joint Journeyman And Apprentice
Training School
1201 66th Street - Baltimore, MD. 21237
410/866-5313 - fax: 410/866-3954**

SAMPLE MATH TEST

This is a sample math test which is very similar to the math test that is given to an applicant as part of the “application process” for entrance to the Plumbers & Steamfitters Local #486 Apprenticeship Program. You may wish to go over the sample math test to become familiar with the questions prior to making application to the school. Do not send this sample test back to the Training School – we do not grade sample math tests.

Addition:

$$\begin{array}{r} 1.) \quad 575 \\ \quad 220 \\ \quad 934 \\ + \quad 18 \\ \hline \end{array}$$

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

Subtraction:

$$\begin{array}{r} 3.) \quad 52495 \\ - \quad 2988 \\ \hline \end{array}$$

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

Multiplication:

$$\begin{array}{r} 5.) \quad 648 \\ \quad \times 2.45 \\ \hline \end{array}$$

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

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Multiplication:

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

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

Division – Carry to the nearest hundredth:

$$9.) \quad 3 \overline{) 3902.00}$$

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

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:

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

$$1 \text{ gal.} = 4 \text{ quarts}$$

Applicant's Name _____ Date _____

Written Problems:

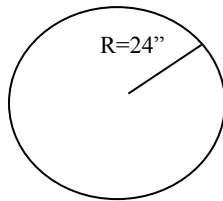
- 13.) At \$29.12 per hour, how much money will you earn in $39 \frac{1}{2}$ hours?
- 14.) One meter is equal to 3.28 feet. How many feet are there in 30 meters?
- 15.) If one kilometer is equivalent to .6 miles, how many kilometers would you have traveled if you went 42 miles?
- 16.) A British Thermal Unit (BTU) is the amount of heat required to raise one (1) pound of water one (1) degree Fahrenheit. How many BTU's would be required to raise 45 pounds of water 18 degrees Fahrenheit?

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- 17.) A column of water 2.31 feet high exerts a pressure of one (1) pound per square inch. How much pressure does a column of water 46.20 feet high exert?

- 18.) In figure #1, what is the circumference of the circle?
Circumference = π x dia.

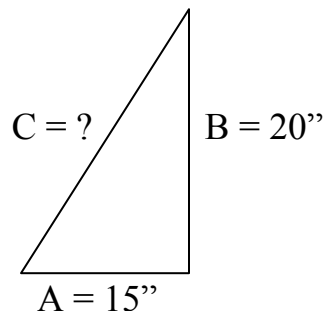
Fig. #1



- 19.) What is the area of figure #1? Area = π x R^2

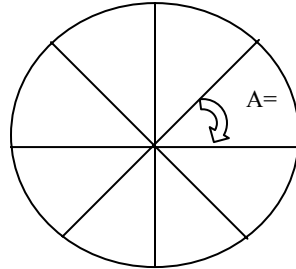
- 20.) Using the formula $C^2 = A^2 + B^2$, what is the length of side C in figure #2?

Figure #2



- 21.) The circle "figure #3" is divided into eight (8) equal parts. What is angle of the section marked A?

Figure #3



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

- 23.) Find the value of "X" in the equations:

a.) $X - 40 = 60$

b.) $6X - 52 = 4X + 40$

FRACTIONS

NOTE: REDUCE ALL FRACTIONS TO THE LOWEST COMMON DENOMINATOR

Addition

$$24.) \begin{array}{r} 6 \frac{5}{32} \\ + 7 \frac{1}{8} \\ \hline \end{array}$$

$$25.) \begin{array}{r} 13 \frac{1}{8} \\ + 6 \frac{1}{2} \\ \hline \end{array}$$

Subtract:

$$26.) \begin{array}{r} 5 \frac{3}{8} \\ - 3 \frac{3}{4} \\ \hline \end{array}$$

$$27.) \begin{array}{r} 19 \\ - 5 \frac{5}{32} \\ \hline \end{array}$$

Multiply:

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

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

Divide:

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

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

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Addition:

$$\begin{array}{r} 32.) \quad 4.2015 \\ \quad \quad .628 \\ + \quad 14.5215 \\ \hline \end{array}$$

$$\begin{array}{r} 33.) \quad .85 \\ \quad \quad 33.95 \\ + \quad 26.751 \\ \hline \end{array}$$

Subtract:

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

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

Multiplication: # 36 - #38 – Multiply to the nearest Ten Thousandth:

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

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

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

Divide: Carry to the thousandth if necessary.

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

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

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Express As A Percentage:

41.) $.25 =$ _____

$.46 =$ _____

Express In Decimal Form:

42.) $35\% =$ _____

$225\% =$ _____

Find The Value Of:

43.) 25% of $250 =$ _____

$.25\%$ of $300 =$ _____

Find The Missing Percentages:

44.) $40 =$ _____ % of 50

$2 =$ _____ % of 50

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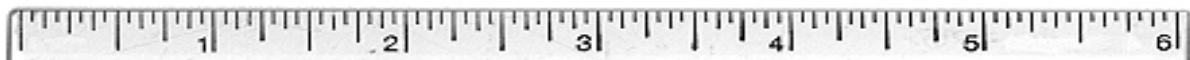
- 45.) What is the interest on \$ 38,925.00 for one (1) year at 5 ½ percent interest?
- 46.) Using the formula $\text{Fahrenheit} = \frac{9}{5} C + 32$, what is the Fahrenheit temperature of a liquid with a centigrade temperature of 80 degrees?
- 47.) Using the formula $\frac{V}{V^1} = P^1/P$ find the value of "V" when "P" = 4, $P^1 = 6$ and $V^1 = 8$.

48.) The specific weight of an object can be found using the formula:

$$\text{Specific Weight} = \frac{A}{C - W}$$

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

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



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

