Plumbers & Steamfitters Local 486

Joint Journeyman & Apprentice Training Committee

• Baltimore, MD • Martinsburg, WV • Seaford, DE

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.

NOTES:

- Calculators will be provided for the math test. NO CELL PHONES.
- Do not round your answer up or down. The answer should have the same number of place values as the problem.
- Answer fraction questions with a fraction answer, Answer decimal questions with a decimal answer.
- Reduce fractions to the simplest form. ie: $^{30}/_{12} = {}^{10}/_{4} = 2\,{}^{2}/_{4} = 2\,{}^{1}/_{2}$

Addition:

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

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

Subtraction:

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

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

Multiplication:

5.) 648
x 2.45

6.) 37.28
x .92

7.) .576
x .05

8.) 2.035
x 785

Division :

9.) 3) 3902.00

10.) 220) 2425.00

Division – Answer in feet and inches.

11.) 8) 34 ft. 8 in.

Division – Answer in gallons and quarts.

12.) 3) 10 gallons 11 quarts

1 gal. = 4 quarts

Written Problems:

13.) At $29.12 per hour, how much money will you earn in 39 ½ 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?

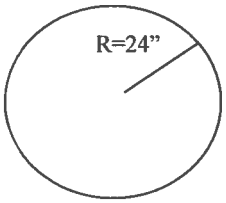
16.) A British Thermal Unit (BTU) is the amount of heat required to raise one (1) pound of water one (1) degree Fahrenheit. How many BTU's would be required to raise 45 pounds of water 18 degrees Fahrenheit?

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. R=24" π= 3.141 (use this exact# for π)

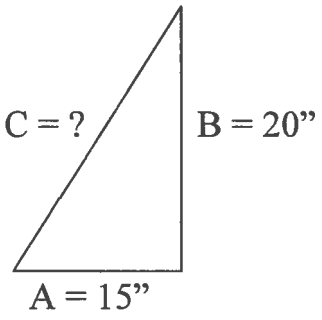
Fig. #1



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

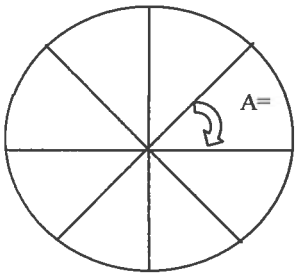
20.) Using the formula $C^2 = A^2 + B^2$, what is the length of side C in figure #2?

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

Addition

24.) $6\ ^{5}/_{32}$
$+\ 7\ \frac{1}{8}$

25.) $13\ \frac{1}{8}$
$+\ 6\ \frac{1}{2}$

Subtract:

26.) $5\ \frac{3}{8}$
$-\ 3\ \frac{3}{4}$

27.) 19
$-\ 5\ ^{5}/_{32}$

Multiply:

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

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

Divide:

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

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

Addition:

32.) 4.2015
.628
+ 14.5215

33.) .85
33.95
+ 26.751

Subtract:

34.) 72.645
- 3.999

35.) 762.95
- 431.26

Multiplication:

36.) 62.92
x .544

37.) 27.924
x .28

38.) .426
x 200

Divide:

39.) .20)8.240

40.) 6.2)28.7250

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

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

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

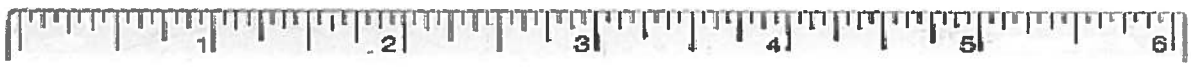
47.) Using the formula $V/V^1 = P^1/P$ find the value of "V" when "P" = 4, $P^1 = 6$ and $V^1 = 8$.

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?