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

1.) 571
   210
   107
   + 11
   ________________
   909

2.) 375
   948
   22
   + 659
   ________________
   1984

SUBTRACTION

3.) 52495
   -1241
   _____________
   51254

4.) 658
   -395
   _____________
   263

MULTIPLICATION

5.) 648
   x 2.4
   ___________
   1555.2

6.) 37.28
   x .92
   ___________
   34.3836
MULTIPLICATION

7.) .576 x .05
8.) 2.035 x 785

DIVISION – CARRY TO THE HUNDREDTH

9.) 3) 3912.00
10.) 220) 2425.00

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

11.) 8) 34 ft. 8 in.

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

12.) 3 10 gallons 11 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?

$\pi = 3.14$ 

Circumference $= \pi \times$ diameter

Figure #1

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

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?

Figure #2

Answer:

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.) \[ \begin{array}{c}
6 \frac{5}{32} \\
\hline
\end{array} \]

25.) \[ \begin{array}{c}
13 \frac{1}{8} \\
\hline
\end{array} \]

\[ \begin{array}{c}
1 \\
+ 7 \frac{8}{10} \\
\hline
\end{array} \]

\[ \begin{array}{c}
6 \frac{2}{10} \\
\hline
\end{array} \]

**SUBTRACTION**

26.) \[ \begin{array}{c}
5 \frac{3}{8} \\
\hline
\end{array} \]

27.) \[ \begin{array}{c}
19 \\
\hline
\end{array} \]

\[ \begin{array}{c}
3 \\
- 3 \frac{4}{10} \\
\hline
\end{array} \]

\[ \begin{array}{c}
5 \frac{32}{10} \\
\hline
\end{array} \]

**MULTIPLICATION**

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

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

**DIVISION**

30.) \( 32 \div 3/8 = \)

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

32.) 4.2015
     .6280
     + 14.5215
     + .850
     + 33.950

33.) .850
     + 26.751

SUBTRACTION

34.) 72.645
     - 3.999
     - 431.26

35.) 762.95
     - 431.26

MULTIPLY

36.) 62.92
     x .544

37.) 27.924
     x .28

38.) .426
     x 200

DIVIDE – CARRY TO THE THOUSANDTH

39.) .20  \( \overline{8.240} \)

40.) 6.2  \( \overline{28.7250} \)

EXPRESS AS A PERCENTAGE

41.) .25 = ________%

42.) .46 = ________%
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 $\frac{A}{B} = \frac{C}{D}$ find the value of $A$ when
$D = 4, \quad C = 6 \quad B = 8$

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
$A = 25 \quad C = 6.25 \quad W = 3.75$

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: