

# Build our Nebraska

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## Sample Math Test

The following are sample math questions that are similar to a math test given to plumber and steamfitter apprentice applicants. An understanding of basic arithmetic is a necessity in the construction industry. It will also help you stand out from other applicants. Do not hand in finished exam since it will not be graded.

Notes:

- You are not permitted to use calculators or cell phones while taking the exam
- Do not round up or down. The answers should have the same number of place values as the problem
- Answer fraction questions with a fraction answer and decimal questions with a decimal answer
- Reduce fractions to the simplest form i.e.:  $\frac{30}{12} = \frac{10}{4} = 2\frac{2}{4} = 2\frac{1}{2}$

Addition:

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

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

Subtraction:

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

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

Multiplication:

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

$$\begin{array}{r} 6) \quad 2.035 \\ \quad \times 785 \\ \hline \end{array}$$

Division:

$$7) \quad 3 \overline{) 3902.00}$$

$$8) \quad 220 \overline{) 2425.00}$$

$$9) \quad 3 \overline{) 10 \text{ gallons } 11 \text{ quarts}}$$

Answer in gallons and quarts (1 gallons = 4 quarts)

Written Problems:

10) At \$29.12 per hour, how much money will you earn in  $39 \frac{1}{2}$  hours?

11) 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?

12) 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?

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

Addition:

$$\begin{array}{r} 14) \ 6 \frac{5}{32} \\ + \ 7 \frac{1}{8} \\ \hline \end{array}$$

$$\begin{array}{r} 15) \ 13 \frac{1}{8} \\ + \ 6 \frac{1}{2} \\ \hline \end{array}$$

Subtraction:

$$\begin{array}{r} 16) \ 5 \frac{3}{8} \\ - \ 3 \frac{3}{4} \\ \hline \end{array}$$

$$\begin{array}{r} 17) \ 19 \\ - \ 5 \frac{5}{32} \\ \hline \end{array}$$

Multiplication:

$$18) \ \frac{1}{4} \times 28 =$$

$$19) \ 4 \frac{3}{4} \times \frac{1}{2} =$$

Division

$$20) \ 32 \div \frac{3}{8} =$$

$$21) \ \frac{3}{4} \div \frac{1}{4} =$$

Express As a Percentage:

$$22) \ .25 = \underline{\hspace{2cm}}$$

$$.46 = \underline{\hspace{2cm}}$$

Express In Decimal Form:

$$23) \ 35\% = \underline{\hspace{2cm}}$$

$$225\% = \underline{\hspace{2cm}}$$