

BASIC MATH SAMPLE TEST

This practice test is provided to help you become familiar with the Basic Math Test, so that you can do your best. You need to get 13 right out of 15 problems here in order to earn the qualifying score of 85%.

If you have difficulty with this sample test, it is suggested that you go to the Tutorial Learning Centers for additional review material and tutoring.

The actual test consists of 27 multiple-choice questions. To qualify with a score of 85%, you will need to solve 23 questions correctly. There is a 10-calendar-day waiting period to retest. If you do not pass on the second attempt, you will be required to take additional coursework prior to taking the test again.

Section A. Decimals: Express answers as decimals, round answers to the nearest hundredth.

1. $2\frac{7}{9}$

2. $28.3 + 0.129$

3. Mary can subscribe to Women's Weekly, for \$55 per year or buy it from the newsstand at \$1.75 per issue. What is the difference, in weekly cost of each magazine, between the annual subscription rate and the newsstand rate?

Section B. Percentages: Express the following as percentages rounded to the nearest hundredth.

4. $\frac{4}{15}$

5. $3\frac{17}{20}$

6. James has a choice between two jobs. One job will pay \$4.67 per hour. The other job will pay \$5.63 per hour but has mandatory health insurance at \$29.32 per month and mandatory retirement at 7.4%. Both jobs are for a 40-hour week. Which job will provide the highest take home pay?

Section C. Fractions: Solve each problem, simplify and reduce answers.

7. $5\frac{2}{3} - 2\frac{5}{6} = ?$

8. $2\frac{1}{5} \times 3\frac{3}{4} = ?$

9. $\frac{5}{8} \div \frac{1}{5} = ?$

Section D. Ratios: The following are equivalent ratios or proportions. Solve each problem for the value of X. Round answers to whole numbers for problems 10 and 11 only.

10. $1 : 4 = X : 128$; X equals ?

11. $10 : 25 = X : 75$; X equals ?

12. John is making 32 servings of his famous spaghetti sauce. The recipe he has is for 12 servings. How much oregano will he need if the recipe calls for 4.0 tablespoons? (note: one tablespoon is equal to 3 teaspoons)

13. While traveling in France, Mary notes that the thermometer reads 34°C . What is the temperature reading in Fahrenheit? Round to the nearest tenth.

14. Which is a better buy? Chocolates at \$.05 per gram or \$7.29 per pound?

15. If gas sells for \$.59 per liter in New Zealand, what would it cost per gallon?

Section E. Conversions: The following are questions that test the ability to do conversions from one measuring system (metric or English) to the other.

The conversion tables you will need are:

Liquid Measurements

1 liter = approximately 1 quart

30 cc = approximately 1 ounce

250 cc = approximately 1 cup (8 ounces)

Temperature Conversions

$$^{\circ}\text{F} = \frac{9}{5} ^{\circ}\text{C} + 32$$

$$^{\circ}\text{C} = \frac{5}{9} (^{\circ}\text{F} - 32)$$

Length Measurements

$$2.54 \text{ cm} = 1 \text{ inch}$$

$$1 \text{ cm} = 0.39 \text{ inch}$$

$$1 \text{ meter} = 39.37 \text{ inches}$$

Weight

$$1 \text{ Kg} = 2.2 \text{ pounds}$$

$$30 \text{ g} = 1 \text{ ounce}$$

$$1 \text{ kg} = 1000 \text{ grams}$$

Answer Key

A.

1. 2.78
2. 28.43
3. \$0.69

B.

4. 26.67 %
5. 385.00 %
6. The job paying \$5.63 because take home pay is \$5.03 / hr.

C.

7. $2\frac{5}{6}$
8. $8\frac{1}{4}$
9. $3\frac{1}{8}$

D.

10. 32
11. 30
12. 10 tablespoons and 2 teaspoons

E.

13. 93.2°F
14. \$7.29 / pound
15. \$2.36 / gallon