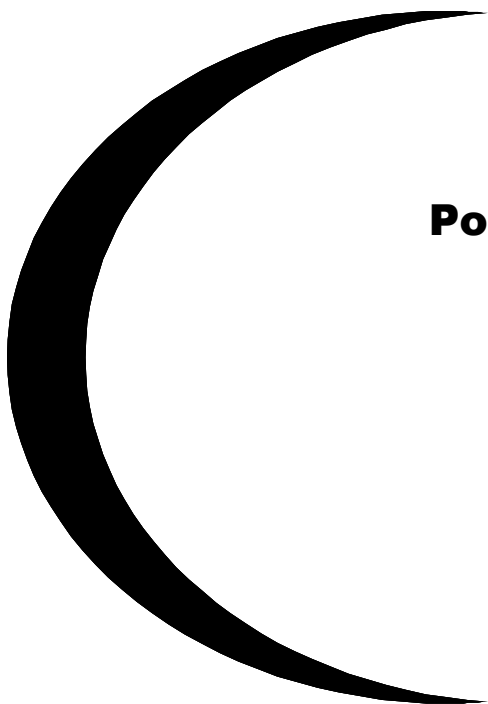
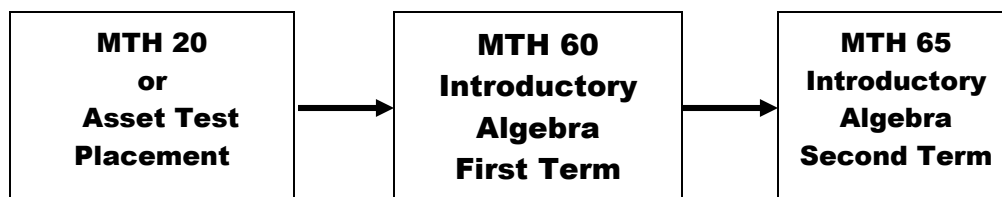




Portland Community College

MATH 60

**INTRODUCTORY ALGEBRA
FIRST TERM**



ARE YOU PREPARED?

- ✓ This mini quiz is meant to serve only as an indicator of a few of the math skills that you are expected to know at the beginning of this course. Do not use these problems as a study guide thinking that they will adequately prepare you for the course.
- ✓ These example problems are merely representative of some of the most important concepts that are taught in the prerequisite courses.
- ✓ The course will offer little or no time for any type of review; it assumes that you are prepared to do the work the first day of class.

**Below are some of the major topics
covered in MATH 60**

I. Integer arithmetic

- A. The four basic operations of addition, subtraction, multiplication, and division
- B. Absolute value, exponents, order of operations

II. One variable linear equations and inequalities

III. Application (i.e. word/story) problems with formulas

IV. Graphing lines

- A. Finding and interpreting slope
- B. Finding and interpreting intercepts
- C. Interpret relationships between variables
- D. Modeling with linear equations

To be successful studying the topics covered in this course, students should be appropriately prepared by: #1 Taking the prerequisite math course within the last three years with a passing grade of A or B, or within the last one year with a passing grade of C, or #2 placing into the course by the ASSET placement test.

Below is a sample of some skills you should have **BEFORE** entering MATH 60.

1. Without using a calculator, can you get at least 16 correct answers on the following problems?

a) Round 6.8449 to the nearest hundredth.

b) Round 7.995 to the nearest tenth.

c) Round 37,328 to the nearest hundred.

d) Change 0.625 to a fraction

e) Write 70% as a fraction and reduce to the lowest terms.

f) Change $\frac{2}{5}$ to a decimal.

g) Multiply: $\frac{9}{16} \times 2\frac{2}{3}$

h) Divide: $1\frac{2}{3} \div 10$

i) Find the average of $7\frac{1}{4}$, 12.5, 8, $10\frac{1}{4}$

j) Perform the indicated operations.
 $7 - 3 \cdot 2 + 10 \div 5$

k) Subtract: $8.3 - .973$

l) Perform the indicated operations.
 $18 \div 2(3) + 2^2 - 5$

m) List these numbers from smallest to largest:

n) Solve the proportion:

$$\frac{5}{9}, \frac{7}{12}, 0.555, 0.583$$

$$\frac{2.5}{4} = \frac{1.1}{x}$$

o) How many inches equal 2 yd?

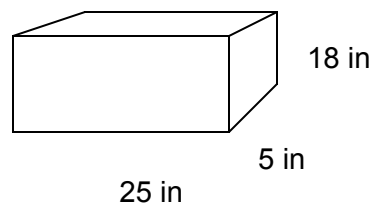
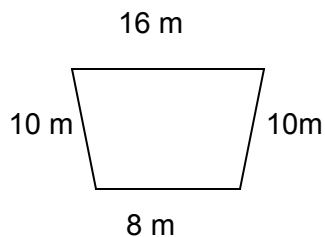
p) Change 72 mg to grams.

q) If 1 km is approximately 0.6 miles, how many miles in 18 km?

r) Find the area of a circle whose diameter is 6 cm.

s) Find the perimeter of this figure:

t) Find the volume of this figure:



2. Without using a calculator, can you get at least 4 correct answers on the following problems?

- a) A family's monthly income is \$1,200. It is spent as follows: 20% on food, 35% on rent, 17% on utilities, 8% on automobile, and the rest on miscellaneous expense. What dollar amount is spent on miscellaneous expenses?
- b) A TV is priced to sell at \$585. What is the sale price if the sale sign says " $\frac{1}{3}$ off"?
- c) A machinist needs a bar that is $\frac{3}{8}$ in. thick. If she cuts off $\frac{3}{32}$ in. thick, how thick is the bar?
- d) A teacher assigns problems 96 to 128 that are multiples of 8. Which problems should the students do?
- e) Find the unit price if the total cost of a 5-lb. steak is \$21.

ANSWERS

Question 1:

- a) 6.84 b) 8.0 c) 37,300 d) $\frac{5}{8}$ e) $\frac{7}{10}$ f) 0.4
- g) $\frac{3}{2}$ h) $\frac{1}{6}$ i) $9\frac{1}{2}$ j) 3 k) 7.327 l) 26
- m) 0.555, $\frac{5}{9}$, 0.583, $\frac{7}{12}$ n) 1.76 o) 72 inches
- p) 0.072 g q) 10.8 mi r) 28.26 cm^2 s) 44 m
- t) $2,250 \text{ in}^3$

Question 2:

- a) \$240 b) \$390 c) $\frac{15}{32}$ in. thick
- d) 96, 104, 112, 120, 128 e) \$4.20 per lb

How many of these problems can you miss and still succeed in MATH 60?

Ideally, NONE.

These problems are just a sample of the larger number of skills that you should be familiar with **BEFORE** taking this course.

If some of these ideas are not familiar to you, you should enroll in the previous course (MTH 20)