

MATH 10 covers addition, subtraction, multiplication, and division of whole numbers
MATH 11 covers addition, subtraction, multiplication, and division of fractions and decimals.

MATH 20 TOPICS AND EXAMPLES

Basic Arithmetic:

Fractions: $2\frac{5}{6} + 8\frac{3}{4}$

$$\frac{7}{9} - \frac{1}{6}$$

$$3\frac{3}{5} \cdot 3\frac{3}{4}$$

$$6\frac{3}{7} \div 6\frac{2}{3}$$

Decimals: $2.856 + .04 + 7$

$$1.4 - 0.49$$

$$0.45(0.003)$$

$$2.112 \div .03$$

Integers: $-8 + 5$

$$-4 - 4$$

$$-2(-3)$$

$$-24 \div 6$$

Exponents and Square Roots: 5^2 $\sqrt{81}$

Orders of Operations: $24 \div 3 \cdot 2 + 5(6 - 4)$

Conversion from fractions to percents to decimals:

Change 55% to a fraction

Change 1.3 to a percent

Change 1% to a decimal

Change 0.28 to a fraction

Change $\frac{2}{5}$ to a decimal

Change $\frac{3}{8}$ to a percent

Geometry

Determine the area, perimeter, and volume of various shapes using standard formula

Basic Measurement

Convert measurements within the English and Metric systems

Applications

Use arithmetic operations including proportions and percents to solve application problems

Charts, Graphs, Statistics

Read and interpret data from charts and graphs.

Find statistical measures such as mean, median, mode, and range.

Display values on a number line.

DE MATH STUDENT PROFILES

- Either never “got math” in K-12 system, or haven't taken math in so long, need a refresher course
- Invariably “math phobic”
 - Many of the other issues for these students stem from this fear.
- Have very limited number sense
 - Don't know their multiplication or addition facts very well
 - Cannot make connections very easily (for example, that 30% is the same thing as three tenths, or that the process for adding money would be similar to adding any two decimal numbers)
 - Cannot transfer the actual computation skill to an application (word problem).
 - Cannot discern the “reasonableness” of an answer (for example, if there are 40 questions on an exam and you finished 30, there cannot possibly be 75% of the questions left to do).
- Do not know how to read a math textbook
- Lack efficient problem solving strategies as is evidenced by the sense of loss when it comes time to solving word problems
- Lack sufficient vocabulary related to math concepts
- Together, these are a deadly combination. Many students chose to leave their math general education requirements for the end of their academic career (hoping it will go away?) only to find that they spend a lot more time in school than originally anticipated. Some feel the need to “take a break” from math between terms not realizing that time off is time lost.

At its best, Math 20 teaches basic mathematical survival skills and problem solving strategies. The topics are comparable to a 6th grade math class. Those who complete the course with an A or B will be successful in Math 60 if they continue the next term. Those with a C generally are not able to complete Math 60 the first time they attempt it.