

# MATH 123 OR MATH 153

(No Calculators)

- Evaluate  $-3^2 + 2(2 - 5)^2$
- Evaluate  $\frac{16}{25} - \frac{3}{10}$
- Identify the slope and x-intercept of the line  $3x + 5y = 15$
- Simplify  $\frac{x^{-2}y^3}{x^4y^{-6}}$
- Simplify  $(7 \times 10^{-8})(9 \times 10^{-6})$ . Write your answer in scientific notation.
- A bin contains 80 cups of dog food. Each day, 3 cups of food is taken from the bin to feed the dogs. Write a linear model that represents the amount of dog food in the bin,  $y$ , after  $x$  days.
- Simplify  $\frac{9 - 21}{-2}$
- Solve the equation  $\frac{2}{3}x + 2 = 10$

(4-function calculator allowed)

- Use unit analysis to change  $\frac{30mi}{1hr}$  to  $\frac{ft}{s}$ .
- Two years ago, a dishwasher was paid \$6.75 per hour. Today the dishwasher is paid \$8.50 per hour. Find the percent increase in the dishwasher's pay. Round to the nearest percent.

Answers:  
1. 9  
2.  $\frac{50}{17}$   
3. slope =  $-\frac{3}{5}$ ,  
x-intercept: (5,0)

- $6.3 \times 10^{-13}$
- $y = 80 - 3x$
- 6
- $x = 12$
- $\frac{44ft}{1s}$
- 10.26%
- $\frac{x^6}{y^9}$



# MATH 123 WITH 123P OR MATH 153 WITH 153P

(No Calculators)

- Rewrite  $\frac{5}{8}$  as a percent.
- 30 is 20% of what number?
- $\frac{5}{9} \div \frac{5}{6} =$
- $\frac{16 \div 4 \cdot 2}{12 - 8} =$
- Find the  $x$  and  $y$  intercepts:  $y = 2x - 5$
- If  $x = 4$  and  $y = -3$ , evaluate:  $-x^2 + y \cdot x$
- What is the volume of an aquarium that is 24 in. long, 12 in. wide, and 12 in. high?
- Simplify:  $3(9x + 2) - 7x + 2$
- Solve for  $x$ :  $\frac{1}{4}x - 3 = 5$
- If the price of skis drops from \$328 to \$216, what is the percent decrease? Round to the nearest percent. (4-function calculator allowed)

Answers:  
1. 62.5%  
2. 150  
3.  $\frac{3}{2}$   
4. 2  
5. (2.5, 0), (0, -5)  
6. -28  
7.  $3456 in^3$   
8.  $20x + 8$   
9. 32  
10. 34%



# MATH PLACEMENT

## MATH 123 AND MATH 153

Course descriptions are shown below. Sample problems for each math course are on the back of this pamphlet. The expectation is that you know how to do these problems when entering the course. Do you recognize these problems? Can you complete them all correctly? This, along with your High School GPA, GED, or SAT/ACT scores, can help you determine how much review you need and the pacing you'll want to complete your math courses.

*Have a conversation with your advisor, and consider these questions when choosing your course pace.*

- How many credits are you taking this semester?
- How many hours per week do you work?
- What other personal time commitments do you have?
- How confident do you feel in math?
- Have you attempted a college math course in the past?
- Have you recently completed high school Algebra II with an A or B?
- Each 1 credit in college requires 2 hours of study time outside of class per week. A 3-credit math course would typically require 6 hours outside of class time per week. Have you set aside the time to successfully complete a math course this semester?

### MATH 123: MATH IN MODERN SOCIETY

3 CREDITS

This course introduces students to the form and function of mathematics as it applies to liberal-arts studies with a heavy emphasis on its applications. Topics covered include ratios, rates and proportions; properties of linear equations; graphing linear equations; constructing and using linear models; exponential and logarithmic equations and models; financial applications; and elementary probability and statistics. (Placement: Level C or higher)

### MATH 123P: MATH IN MODERN SOCIETY - SUPPLEMENT

2 CREDITS

This course provides just-in-time preparation for the mathematical skills necessary to be successful in MATH-123 with an emphasis on problem-solving and college-readiness skills. Topics will include order of operations, fraction and decimal arithmetic, percent, scientific notation, interval notation, lines, calculator use, and mathematical modeling. Must be taken concurrently with MATH-123. (Placement: Level B or higher)

### MATH 153: STATISTICAL REASONING

3 CREDITS

This course introduces students to problem solving and decision making using single and multivariable statistical models. The course focuses on conceptual understanding of randomness, variability, statistical models, and inference through exploration of data. The use of technology for analysis of data is integrated throughout. Topics include descriptive statistics, probability, hypothesis testing, confidence intervals, likelihood ratios, correlation, and regression. (Placement: Level C or higher)

### MATH 153P: STATISTICAL REASONING - SUPPLEMENT

1 CREDITS

This course provides just-in-time preparation of the mathematical skills necessary to be successful in MATH-153 with an emphasis on problem-solving and college-readiness skills. Topics may include order of operations, fraction and decimal arithmetic, percent, scientific notation, interval notation, lines, calculator use, and use of statistical software. Pre-requisite: This course must be taken concurrently with MATH-153. (Placement: Level B or higher)