

What is MATH 115?

This course intertwines mathematics and the health sciences field. Students will learn the necessary skills to succeed in the health sciences workplace. Topics begin with a review of basic arithmetic and foundational math skills, then progress through simplifying and solving algebraic expressions and equations, respectively. This course covers statistical measures of central tendency: mean, median, mode and range. Problems related to the health care field include oral, parenteral, and intravenous dosage calculations and dosage calculations based on weight. Additionally, students will learn percent strength solutions, how to read medication labels, syringes, IV bags, and graphs, and use ratios and proportions to convert units in drug calculations.

- If you feel confident you could correctly answer 4, 5 or all 6 of these questions without a calculator, then enroll in only MATH 115.
- If you feel less confident, would need a calculator, or think you could only answer 0, 1, 2, or 3 questions correctly, then enroll in MATH 115 with additional support.

1. Can you complete these operations with fractions?

$$34\frac{1}{4} + 10\frac{4}{5} =$$

$$34\frac{1}{4} - 10\frac{4}{5} =$$

$$34\frac{1}{4} \times 10\frac{4}{5} =$$

$$34\frac{1}{4} \div 10\frac{4}{5} =$$

2. Can you convert between fractions, ratios, decimals and percentages?

Fraction	Ratio	Decimal	Percentage
?	?	?	$15\frac{1}{4}\%$
?	7:16	?	?

3. Can you read this syringe? (No, it isn't 2.3 mL)



4. Can you answer the following percent strength solution questions: A 0.09% strength solution has been prepared. In this example % signifies g/mL:

- How many grams of medication are in the 0.09% strength solution?
- How many milliliters of solution are in the 0.09% strength solution?
- Express this solution as a simplified ratio.
- If you have 50 mL of solution, how many grams of pure drug will you need in order to keep the 0.09% solution?

5. Can you translate this into an equation and solve it?

Donna has seven more patients to care for than Robert. If Donna has 18 patients to care for, how many does Robert have?

6. Can you calculate the mean, median, mode, and range of this data: 101, 98, 99, 97, 98, 100?