

What is MATH 210?

MATH 210 is a college level statistics class designed to introduce students to the basic methods and concepts used in statistical analysis. These are techniques used across various industries, government, sciences, and social sciences. The course requires algebraic fluency at the level of Math 101, the 1st college algebra course offered by the college; however, the concepts and methods of problem solving are very different from those of an algebra course. Math 210 can be used as a terminal math class in many programs, & is required for entry into graduate studies in many fields. ***Always discuss with your advisor before selecting your math course.***

I need MATH 210. Should I enroll in it directly or in a preliminary course?

So, you've learned that you need or want to take MATH 210. This is a brief assessment to help you decide if you should also take another class before taking your MATH 210 class.

- If you feel confident that you could correctly address 6 or more of these exercises, then you should enroll in MATH 210.
- If you feel less confident or think that you could only address 3, 4, or 5 exercises correctly, then consider enrolling in MATH 101 (or MATH 101 and MATH 101S) beforehand.
- If you feel more concerned or think that you could address fewer than 3 exercises correctly, then consider enrolling in MATH 101 and MATH 101S beforehand.

1. In Weirton, 7000 people celebrated National Dark Chocolate Day in 2023. Tracking studies later showed that half of those celebrants consumed at least 8 ounces of chocolate and that 13% consumed no more than 3 ounces of chocolate. How many consumed an amount of chocolate between 3 oz. and 8 oz.?

2. Simplify each expression.

a.

$$\sqrt{\frac{2^2 + 50 + (1 - 4)^2}{7}}$$

b.

$$\frac{2^2}{30} + \frac{3^2}{30} + \frac{4^2}{30}$$

c.

$$\frac{10^{11}e^{-10}}{11 * 10 * 9 * \dots * 3 * 2 * 1}$$

3. Sketch the graph of $y = 6 - 2x$ on the coordinate plane, and then identify the slope, the x intercept, and the y intercept.

4. Determine all values from the following set that are either “too small” (they are more than $1.5 * W$ units below 138) or are “too big” (they are more than $1.5 * W$ units above 146), where $W = 8$.

$$\{101, 103, 138, 140, 142, 143, 144, 146, 147, 158\}$$

5. In a famous photograph, the Empire State Building casts a shadow with area $10,000,000 \text{ m}^2$. If 83% of the shadow lies on Fourth Avenue or further North, what is the area of the portion that lies South of Fourth Avenue?

6. Find the value of x where

$$\mu = 74, \quad \sigma = 2.1, \quad z = 3, \quad \text{and} \quad z = \frac{x - \mu}{\sigma}.$$

7. Daigoro is taking an Algebra class where the course grade is determined by three exams of equal weight and a final exam of double weight. What is the minimum score he needs in order to earn a B grade (80%) for the course if his regular exam scores are 77, 84, and 81 ?