What is MATH 110?

MATH 110 is PreCalculus, a college level class designed to prepare students to succeed in a Calculus class. Note that it serves some other purposes and can serve as preparation for some Science courses. Much of the material in the course is familiar to students who have had College Algebra, but the level of understanding required is more rigorous and many additional topics are treated.

I need MATH 110. Should I enroll in it directly or in a preliminary course?

So, you've learned that you need or want to take MATH 110. This is a brief assessment to help you decide if you should also take another class before taking your MATH 110 class. It's also a good idea to talk with an advisor before making your decision.

- If you feel confident that you could correctly address 6 or more of these exercises and you meet the prerequisites for the course, then you should enroll in MATH 110.
- If you feel less confident, if you think that you could only address 3, 4, or 5 exercises correctly, or if you have not met the prerequisites for the course, then consider enrolling in MATH 108 beforehand. Please explore the MATH 108 guide.
- If you feel more concerned or think that you could address fewer than 3 exercises correctly, then consider enrolling in in MATH 101 (or MATH 101 and MATH 101S) beforehand. Please explore the MATH 101 guide.

1. Use the given function, $f(x) = 3x^2 - 5$, to evaluate each.
   a. $f(10)$
   b. $f(t+1)$
   c. $f(3x^2 - 5)$

2. Solve each equation.
   a. $3x - 11 = 5(10 - 2x)$
   b. $\left| 3x - 5 \right| = 7$
   c. $(x-7)(x+3)^2(2x-5) = 0$

3. Sketch the graph of $y = 2 - 4x$ on the coordinate plane.

4. Describe what it means for two algebraic expressions to be equivalent.

5. Describe the following set, using roster notation.

$$(\pi, 7) \cap \mathbb{Z}$$

6. A ramp rises, forming a $12°$ angle with the ground and connecting the base of one building with another building 50 meters away.
    a. How high above the ground will the ramp meet the second building?
    b. What is the length of the ramp?

7. Sketch the region satisfying each.
    a. $x + y > 5$
    b. $x - y \leq 11$

8. Determine the implied domain of the function given by

$$g(x) = \frac{\sqrt{x+5}}{x-3} \ .$$