Are you ready for MTH 161?

The purpose of this review is to verify your readiness for MTH 161.

You do NOT need to solve these problems. Simply review them and answer the three questions below.

- Do these math problems below look familiar to you?
- Have you learned these types of problems in prior math classes?
- If you reviewed this material, would you be able to solve most of these problems?

1. Simplify the following expressions.

   a. $(-2x^3y^6)^3$ b. $\dfrac{40x^3y^3}{5x^4y}$ c. $(5a^2b^3)\cdot(3b^2c^3)$

2. Given $f(x) = -x^2 + 6x - 11$, identify the vertex, x- and y- intercepts and sketch the graph.

3. Factor the following completely.

   a. $3b^3 - 15b^2 - 42b$

   b. $8x^3z - 27y^6z$

   c. $4x^2 - 8x - 16$

4. Solve the following equations.

   a. $2x^2 = x + 3$

   b. $\sqrt{x+3} = 5$

   c. $\dfrac{3}{x} + \dfrac{2}{x+1} = \dfrac{3}{x+1}$

5. Solve the inequality and sketch your solution on a number line.
$$2x - 3 < 3x + 5$$

6. Find the equation of the line in Slope-intercept form passing through the points $(-2,5) and (0,2)$.

COURSE RECOMMENDATIONS BASED ON QUESTIONS ABOVE

- If you answered **"yes" to at least 2 of the above questions**, you should consider enrolling in **MTH 161**.

- If you answered **"yes" to 1 of the above questions**, you should consider enrolling in **MTH 161 + MDE 61**.

- If you answered **"no" to all 3 of the above questions**, refer to the **"Are you ready for MTH 154, 155, or Algebra?"guide**.