MATH 1030 Calculator Competencies

Upon completion of MATH 1030, students should have mastered all of the MATH 1020 Calculator Competencies as well as the calculator skills that are listed below. If you are unfamiliar with any of these skills by the end of the quarter, please contact your instructor. These are **REQUIRED** skills, so it is important that you take them seriously!

1. Solve a system of equations graphically.

2. Identify and interpret scientific notation.

3. Graph polynomial equations.

4. Solve polynomial equations.

SELF-TEST: **Use your *calculator* to answer all of the following questions.**

1. Solve the system of equations $\begin{cases} -3.65x + 0.98y = 11.77 \\ -7.89x + 0.68y = 3.26 \end{cases}$ using the graphing method.

2. Calculate the following. Express your answers in scientific notation.

   a) $\dfrac{5000 \times 0.000035}{200}$ b) $\left(3 \times 10^{-7}\right)^3$

3. Graph $y = -x^2 - 10x + 600$. Every important feature of the graph must be visible in your viewing window.

4. Solve the following:
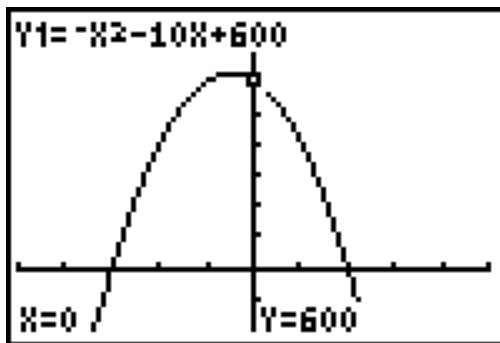
   a) $x^2(5x + 3) = 26x$ b) $x^3 + 5x^2 = x + 5$

ANSWERS TO SELF-TEST

1. (0.92, 15.42)

2. a) 8.75×10^{-4} b) 2.7×10^{-20}

3. Window settings used to produce graph below: [-50, 50, 10] by [-200, 800, 100]
    Other window settings would be valid. Just make sure the intercepts are clearly visible.

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Y1=-X2-10X+600




X=0            Y=600
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4. a) $x = -2.6, 0, 2$ b) $x = -5, -1, 1$