Exercises. Due Tuesday Feb. 11.

1. Express the numbers 76234, 1265, and 87.432 in sexagesimal.
2. Compute the products
   (a) 1, 23 * 2, 9
   (b) 2, 4, 23 * 3, 34
3. Solve the following system «ala the Babylonian "false position" method. State clearly what steps you are taking. $2x + 3y = 1600$, $5x + 4y = 2600$.
4. Carry out the process to compute the square root of 2 using the mean method in sexagesimal, beginning with $a_1 = 1;25$ using Babylonian arithmetic without rounding, to get the value 1;24,51,10.
5. Modify the Babylonian root finding method (for $\sqrt{2}$) to find the square root of any number. Use your method to approximate $\sqrt{3}$. Begin with $x_0 = 1$.
6. Explain how to adapt the method of the mean to determine $\sqrt[3]{2}$.
7. Show that the general cubic $ax^3 + bx^2 + cx = d$ can be reduced to the normal form $y^3 + ey^2 = g$.