Biology 1107L   Name: _____

Exercise 4B

Prelab activity: Math Problems   Date: _____ Lab section: _____

1. (**HARD**) What is the concentration of DNA solution if its absorbance at 260nm is 0.412? (Remember the appropriate constant to use: 50 ng of DNA/μL of solution)

2. (**HARDER**) What is the expected absorbance of a DNA solution with a concentration of 37.5 ng of DNA/μL of solution? (Hint: to solve, rearrange the formula DNA concentration = Absorbance (A_{260}) x 50 ng DNA/μL of solution and then solve for absorbance)

3. (**HARDEST**) Imagine you have substance Z that absorbs light at 600 nm (i.e., its goldilocks wavelength of absorbance is A_{600}) and its constant at this wavelength of light is 25 ng of Z/μL of solution. What is its concentration if the absorbance is 0.15?