Math 115, Section 068 - Extra Credit 1   Name: _____
Date: 9/14/18

Write legibly, show work and indicate your final answers. I am grading this based on effort. I can tell if you tried this 5 minutes before handing it in and you will not receive credit. Hand this in at the beginning of class on Wednesday (9/19/18)

1. Solve for x in the following equations algebraically. Show all your work step by step and write your answers in **exact form** to receive full credit.

   (a) $4(10^{2\log(x)+1}) = 3$
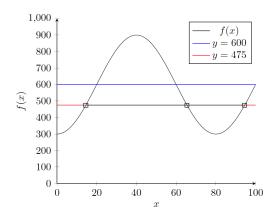
   (b) $e^{kx} = 2e^{x+2}$

   (c) $\log(100x) = 2 + 2\log(x^2)$

2. The formula for the figure below can be written in the following general form:

$$y = f(x) = A\cos(Bx) + K$$

where A,B, and K are values we can find from the figure.

(a) Find the formula for $f(x)$. Hint: Your value for A should be negative.

$$f(x) = \underline{\hspace{3cm}}$$

(b) Find the x-coordinates of the three points indicated by the square markers.

The x-coordinates are: \underline{\hspace{4cm}}