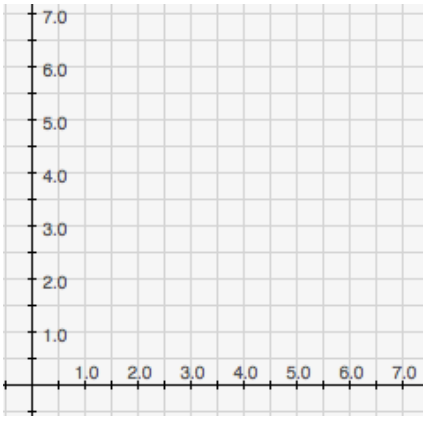
COSC150 ICA 13Feb20 Name/Pledged_____

OPEN NOTES, NOT OPEN COMPUTER

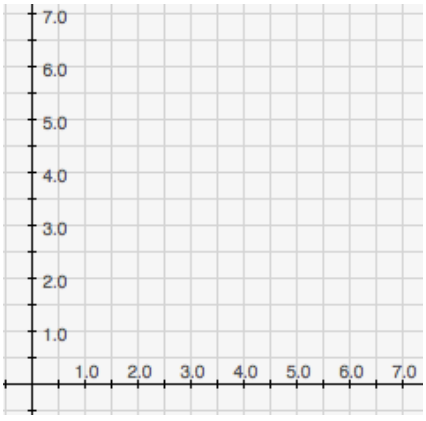
1. Consider two simple functions: $y(x) = 2x + 3$ and $-0.5x + 6$
   a. Sketch the main features of these functions:



   b. What is their point of intersection, if any?

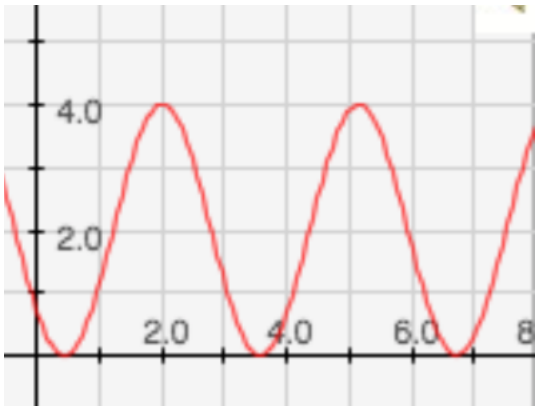
   c. What is the most striking feature of these two functions?

2. Consider a quadratic function in the form: $y(x) = 3(x-2)^2 + 4$
   a. Sketch the main features of this function near its vertex



   b. If this same function were written in the form: $y(x) = ax^2 + bx + c$ what are a, b, and c?

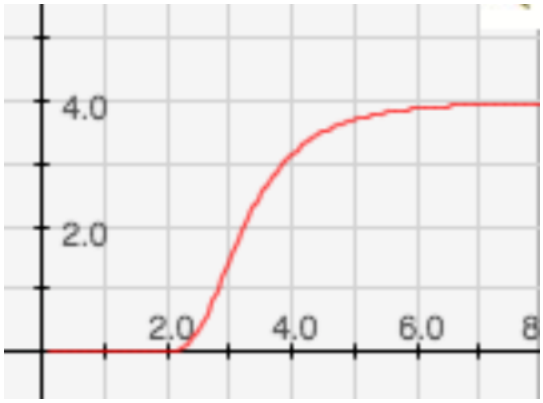
3. Consider the graph of following oscillating function:



   a. Write a functional representation in the form: ***f(x)=a*cos(b*(x-c))+d***

   b. Sketch above ***f(x)=1*cos(2*(x-3))+3***

4. Consider the graph of one form of logistic (S-curve) for ***f(x)=4*exp(-(3/x)^5)***



   a. On the graph above, sketch ***f(x)=3*exp(-(3/x)^5)***

   b. On the graph above, sketch ***f(x)=4*exp(-(4/x)^5)***

   c. On the graph above, sketch ***f(x)=4*exp(-(3/x)^7)***