Quiz 1

Key
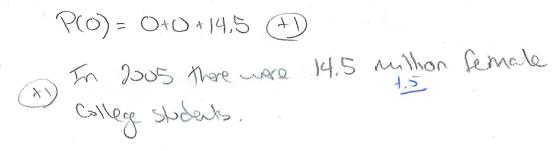
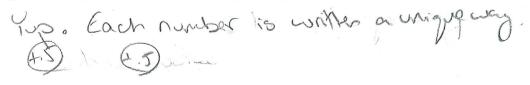Show *all* your work. No credit is given without reasonable supporting work. There are *two* sides to this quiz.

1. The equation $P(t) = -0.002t^2 + 0.54t + 14.5$ models the approximate number (in millions) of female college students in a country for the academic years 2005-2009.

   (a) [1] (Functions Activity #2) Find $P(a+h)$. (No not simplify!)

   $$P(a+h) = -0.002\overline{[a+h]}^2 + 0.54\overline{[a+h]} + 14.5$$

   (+.5)   (.5)

   (b) [2] (WebHW1 #18) Find the P-intercept and explain what it represents.

   $$P(0) = 0 + 0 + 14.5 \quad (+1)$$

   (+1) In 2005 there were 14.5 million female
   college students.
   +.5

2. Define G that takes numbers to the letter that it starts with when written in english. For example, $G(2) =$ t since two begins with the letter t.

   (a) [1] (2017 Winter TMath120) Is the point $(6, s)$ on the graph of G? Why or why not?

   Yes?   6 is six which starts with the letter s
   (+.5)   (.1.5)

   (b) [1] (§1.3 #104) Is G a function? Why or why not.

   Yup. Each number is written a unique way.
   (+.5)   (+.5)

3. Let g be the piecewise defined graph shown below.

(a) [1] (WebHW1 #10) Find $g(3)$

$2\,(\checkmark)$

(b) [2] (WebHW #12)
Estimate x such that $g(x) = 1$.

$x = -3, 2$ and 4

$(\checkmark)(\checkmark)$ $(\checkmark)$

understand want x values $(\checkmark)$

(c) [2] (§1.1 #104) Identify any minimum point(s) of g for $-5 \le x \le 5$.

when $x = 5$, $y = -2$

if $(1, -2)$ give H.S