

)a To determine the x intercepts

$$C(u)=0 \quad 0=(600+115n)/n \quad n=-600/115= -5.22$$

The value of x is negative but years are only positive and therefore the x intercept does not exist

b)y-intercept

$$n=0$$

$$c(0)=(600+115*0)/0=\infty$$

therefore y intercept does not exist

c)to find horizontal asymptotes we find value of c(u) when  $n \rightarrow \infty$

$$\lim_{n \rightarrow \infty} c(u) = \lim_{n \rightarrow \infty} \frac{600+115n}{n} = 115$$

horizontal asymptotes =115

d)vertical asymptote

$$\text{denominator}=0 \quad n=0$$

vertical asymptote is zero

e)  $(-\infty, 0) \cup (0, \infty)$

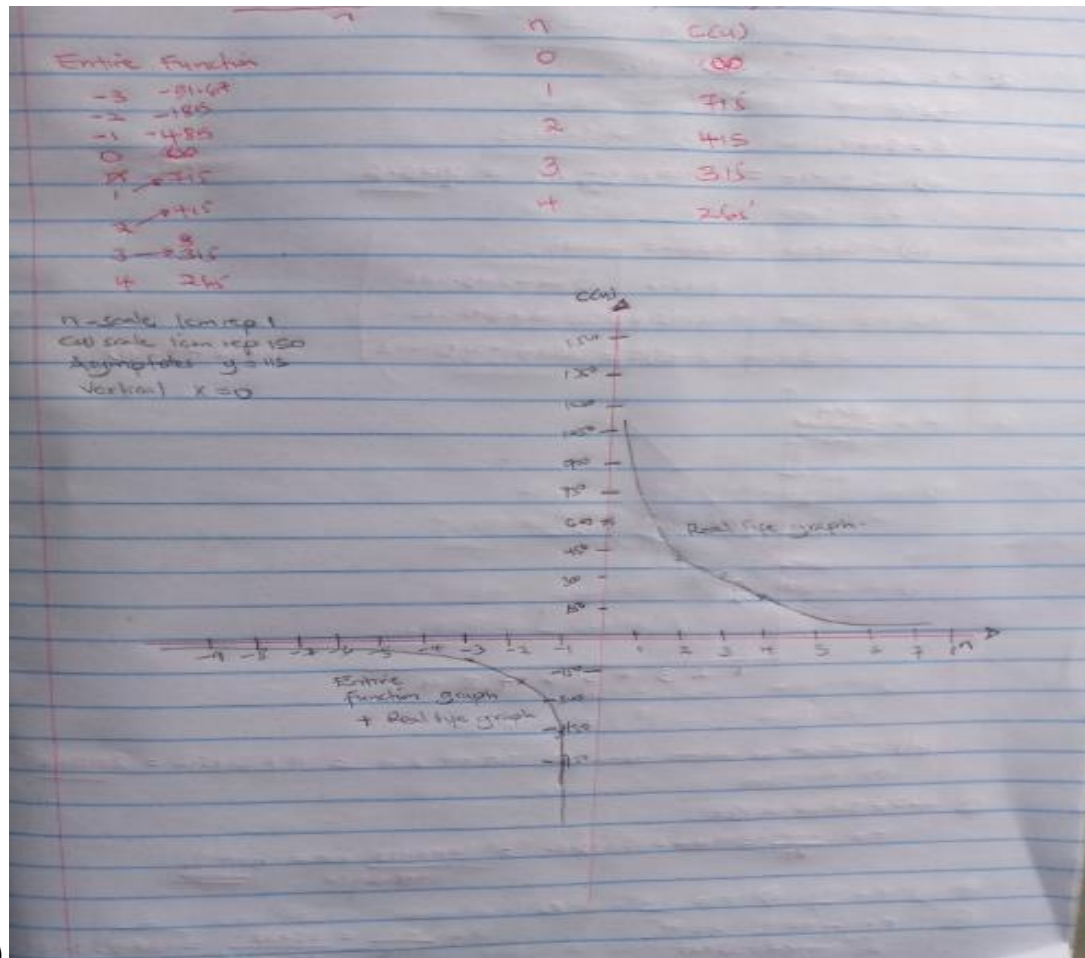
f)  $n \geq 0$

g)  $-\infty, \infty$

h)  $600, \infty$

i)  $180=(600+115n)/n \quad n=-.23$

$$n \geq 9.23$$



k)

l) the graph of real life is valid for only positive values of n to  $\infty$  while for the entire function is valid for all values from  $-\infty$  to  $\infty$

m) no increasing interval

n) decreasing interval  $-\infty$  to 0 and 0 to  $\infty$

o)  $(c(u) \text{ at } 25 - c(u) \text{ at } 10) / 10 = [10(600 + 115 \cdot 25)25 - (600 + 115 \cdot 10) / 10] / 10 = -2.4$  dollars/year

p) instantaneous rate at 10 = value at 10/10

$(600 + 115 \cdot 10) / 10 / 10 = 17.5$  dollars/year

q) average involves taking the change over a number of years and dividing it with the change in time while instantaneous involves taking absolute values at a point divided by absolute time at that point.

r) c becomes zero