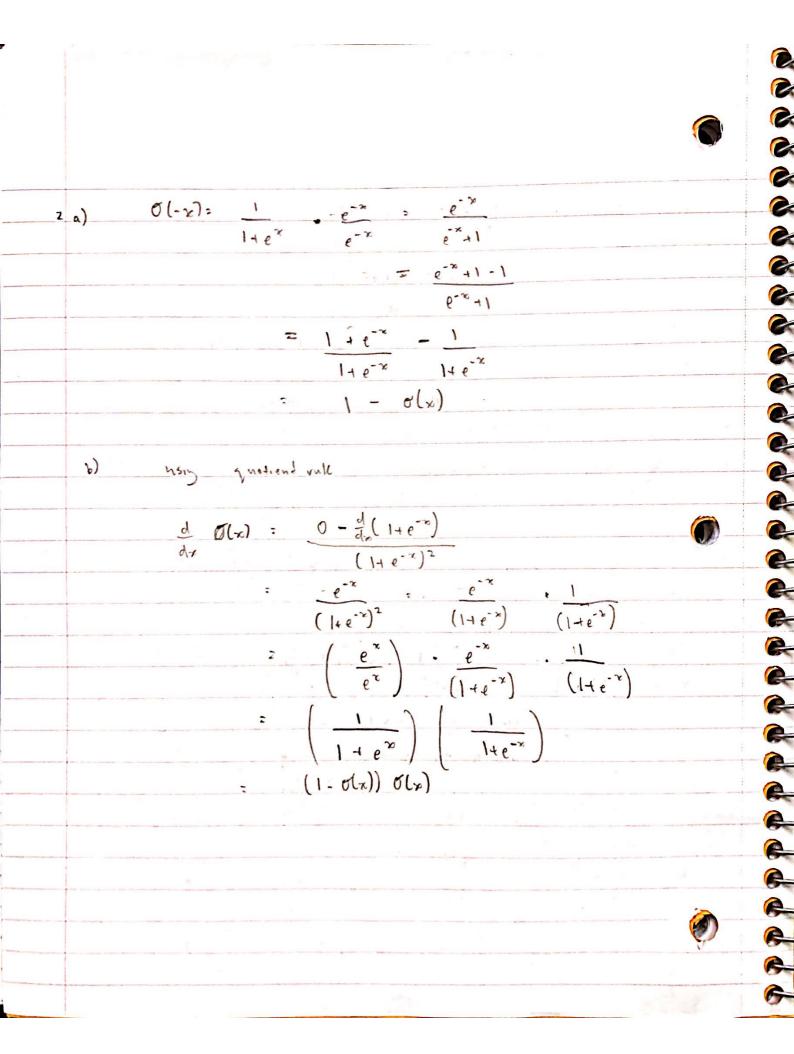
```
Consider the case of n=2. If we expend the summiations
                                                                                                                                     a, x, + a2 x2 = (a,+a2) (x,+x2)
                                                                                                                                                             = 0, 0, + 0, x2 + 02 x, + 02 x2
                                                                                                                                     When is only true it 9,902+ 922, = 0. Hence folse
                                                                                                                     Counter exemple: n=2, a=x,=a== 1
                                                                                                                               substituting for to we have,

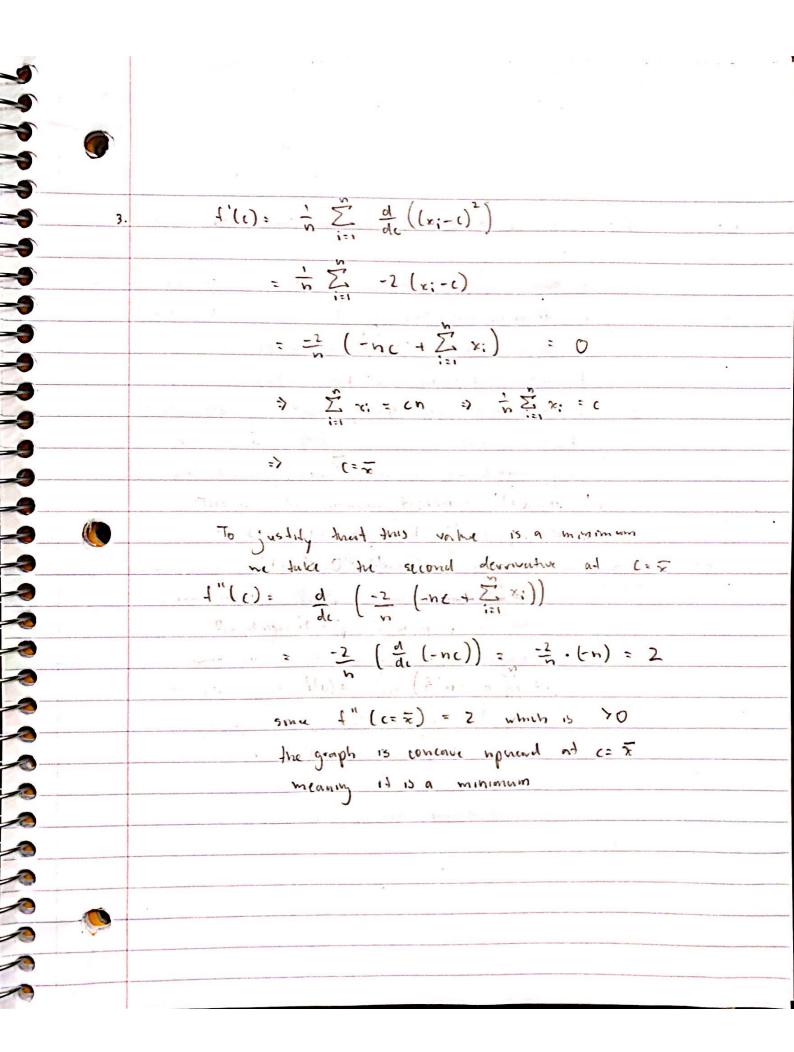
naz = naz ( in E x; )
                                                                                                                                                                                        = 93 = 2; = = = 03 =:
                                                               c) False; substituty for a and \( \times \) where,

\[
\text{Nax} = \text{N} \left( \frac{1}{N} \overline{\text{N}} \arg \varphi_1 \right) \left( \frac{1}{N} \overline{\text{N}} \arg \varphi_1 \right) \right) \( \frac{1}{N} \overline{\text{N}} \arg \varphi_1 \right) \)

\[
\text{Nax} = \text{N} \left( \frac{1}{N} \overline{\text{N}} \arg \varphi_1 \overline{\text{N}} \overline{\text{N}} \arg \varphi_1 \overline{\text{N}} \overline{\text{
                                                                                                                         Similarly to part a) if we use n=2

then \sum_{i=1}^{n} a_i x_i = \frac{1}{n} \sum_{i=1}^{n} a_i \sum_{i=1}^{n} x_i
                                                                                                                                                                  a, x, + a2 x2 2 2 ( a, + a2) (x, + x2)
                                                                                                                                              which is only time it
                                                                                                                                                 (a,x, + a, 2, ) - a,x2 - a,x, = 0
                                                                                                                  Counter example:
                                                                                                                                                             v=2 , a, = x, =0 , a2 = x2 = 1
```







	a) 2. commot be tomich with information in the article
	while we know the percent of surveyed adults who have a
	great trust in religious tenders it screntists respectively,
	we don't know the Intersection of the 2 groups.
	In other words; he don't know it the 2 groups,
-	those who trust scientists and those who trust religious
-	knows are mustually exclusive. Without this we cont
-	know how many people and you boll grouped sound
	Const accurately estimate p.
-	Address of the second of the s
	b) Toyota; Some the cur nas from Berkeley (Alameda (sam)
	and we know that the most common make
	of car in Alarmeda 15 Tayota, me
	gress Toyota. Also, some we know
	nothing about the volative frequences of
	specializ makes of cases getting speeding
	violations, the tout that the com
	was speeder gives his no additional information
	To assure the make of the car.

5	Let A = the probability a 40 yr old nomen has
	brenst conver
	B= the probability a normer tests positive for
	brenst comus
	using Bayes Rule:
	P(AIB) = P(BIA) P(A)
	P(b) Note PLA)= 1-PLA)
	Many total probability rule:
	= P(DIA)P(A)
	P(BIA) P(A) + P(BIA) P(A)
	= (.80) (0.01)
	(10,0-1) (10,0(08,)
	= .008 = 0.078
	.006 4 .09504 .10304
1	
1	

