

$$\lambda = 4$$

$$[2s - (4)^2]^2$$

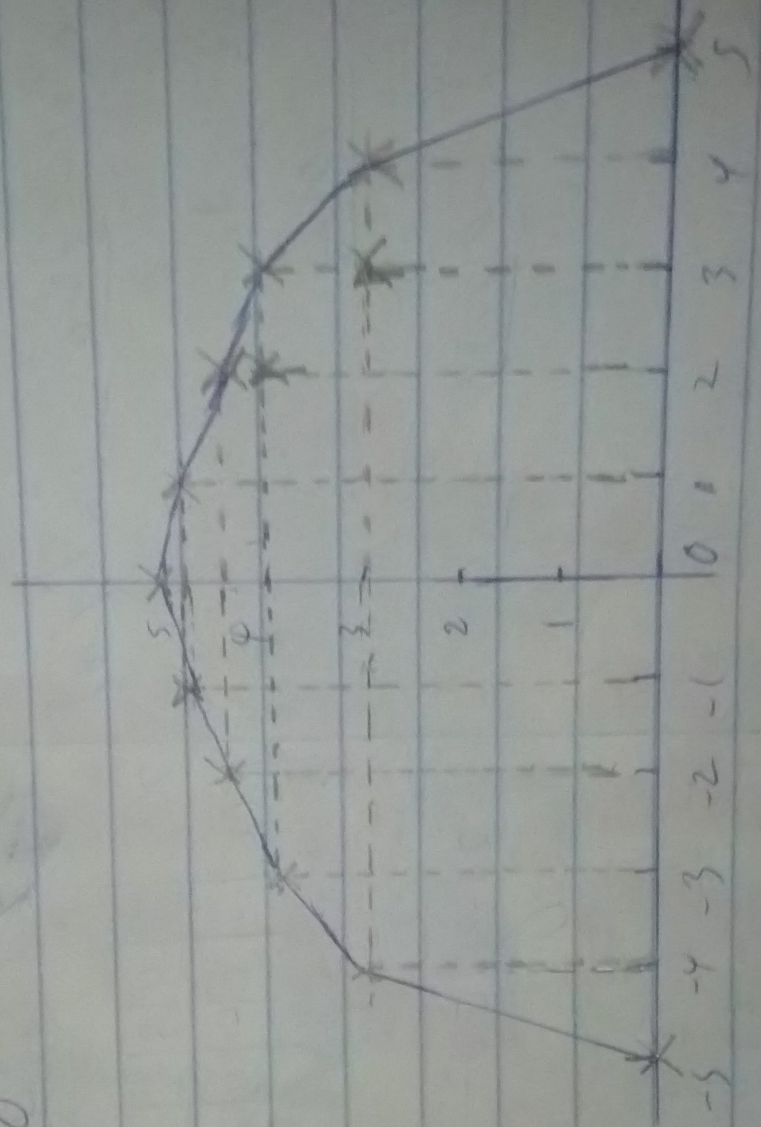
$$-(2s - 16)^2 = 9^2$$

$$-13$$

$$\lambda = 5$$

$$[2s - (5)^2]^2$$

$$-(2s - 25)^2 = 0$$



ENG 281 ASSIGNMENT

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18/EN 602/068
Computer Engineering

88 5.96
8.85 5.97
8.9 5.98
8.95 5.99
9 6

$$1) F(x) = \frac{\sin ax}{bx}$$

substituting $x \rightarrow 0$

$\lim_{x \rightarrow 0} f(x) = \frac{0}{0} = \text{undefined}$

Using L'Hopital's rule

$$\frac{\sin ax}{bx} = \frac{a \cos ax}{b}$$

$$\therefore \lim_{x \rightarrow 0} \frac{a \cos ax}{b} = \frac{a \cos 0}{b} = \frac{a(1)}{b}$$

$$= \frac{a}{b}$$

$$\therefore \lim_{x \rightarrow 0} f(x) = \frac{a}{b}$$

$$2) f(x) = 5x - 21$$

$$b = 0.1, \Delta b = 0.01$$

5.9 6 6.1
F-E L L+E

L-F	a-b	a	a+b	L+E
8.5	5.9	6	6.1	9.5
8.55	5.91	6.09	6.09	9.45
8.6	5.92	6.08	6.08	9.4
8.65	5.97	6.07	6.07	9.35
8.7	5.94	6.06	6.06	9.3
8.75	5.93	6.05	6.05	9.25

$$1) F(x) = (25-x^2)^2$$

x	-5	-4	-3	-2	-1	0	1	2	3	4	5
f(x)	0	3	4	4.98	4.5	3	0	3	4	3	0

$$x = -5$$

$$[(25-65)^2]^2 = (25-25)^2 = 0^2 = 0$$

$$x = 0, 65 - 0^2 = 65$$

$$24^2 = 490$$

$$x = 0$$

$$[(25-0)^2]^2 = 25^2 = 625$$

$$x = -4$$

$$[(25-(-4)^2)^2]^2 = 9^2 = 81$$

$$= 3$$

$$x = 1$$

$$[(25-(1)^2)^2]^2 = (24)^2 = 576$$

$$= 4090$$

$$x = 3$$

$$[(25-(3)^2)^2]^2 = 16^2 = 256$$

$$= 4$$

$$x = 2$$

$$[(25-(2)^2)^2]^2 = (21)^2 = 441$$

$$x = -2$$

$$[(25-(-2)^2)^2]^2 = 21^2 = 441$$

$$= 458$$

$$x = 3$$

$$[(25-(3)^2)^2]^2 = 16^2 = 256$$

$$= 4$$