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ASSIGNMENT

1 $\frac{\sin ax}{bx}$ $\lim_{x \to 0}$

$F(x) = \frac{\sin a(0)}{b(0)}$ = Undefined

Using L'Hopital's rule

$\lim_{x \to 0} F(x) = \frac{\sin ax}{bx}$

$\lim_{x \to 0} \frac{F(x)}{} = \frac{a \cos ax}{b}$

$\lim_{x \to 0} \frac{F(x)}{} = \frac{a \cos a.(0)}{b}$

$\lim_{x \to 0} F(x) = a/b$

⑥ $f(x) = 5x - 21$

$\varepsilon = 0.1$, $\Delta\varepsilon = 0.01$, $x = 6$

L-e	a-δ	a	a+δ	L+e
8.5	5.9		6.1	9.5
8.55	5.91		6.09	9.45
8.6	5.92		6.08	9.4
8.65	5.93		6.07	9.35
8.7	5.94		6.06	9.3
8.75	5.95		6.05	9.25
8.8	5.96		6.04	9.2
8.85	5.97		6.03	9.15
8.9	5.98		6.02	9.1
8.95	5.99		6.01	9.05
9	6		6	9

3) $(25-x^2)^{1/2}$ at the Interval (-5, 5). Show the function is continuous

x	fx
-5	0
-4	3
-3	4
-2	4.58
-1	4.899
0	5
1	4.899
2	4.58
3	4
4	3
5	0

$f(x) = \sqrt{25-x^2}$ is continuous for all values ranging from -5 to 5.