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DEPARTMENT: CIVIL ENGINEERING

1. Since there is no function to substitute the limit of x, we can say that f(x)=π. Therefore=3.142

1.

|  |  |  |  |
| --- | --- | --- | --- |
| F(x) | x-δ x=6 | x+δ | F(x) |
| 8.50 | 5.90 |  | 6.10 | 9.50 |
| 8.55 | 5.91 |  | 6.09 | 9.45 |
| 8.60 | 5.92 |  | 6.08 | 9.40 |
| 8.65 | 5.93 |  | 6.07 | 9.35 |
| 8.70 | 5.94 |  | 6.06 | 9.30 |
| 8.75 | 5.95 |  | 6.05 | 9.25 |
| 8.80 | 5.96 |  | 6.04 | 9.20 |
| 8.85 | 5.97 |  | 6.03 | 9.15 |
| 8.90 | 5.98 |  | 6.02 | 9.10 |
| 8.95 | 5.99 |  | 6.01 | 9.05 |
| 9.00 | 6.00 |  | 6.00 | 9.00 |

Since the limits are defined both on the L.H.S and R.H.S so it can be said the limit is real and thus exists.

1. Lim 3-x = 3-(3+8) = 3-3-8 = -δ = -1 x→3⁺ |3-x| |3-(3+8)| |3-3-8| |-δ|
2. Lim x-3 = (3)-3 = 0 Since the Lim x-3 is undefined, we substitute (3+δ) and (3-δ) x→3 |x-3| |(3)-3| 0 x→3 |x-3| for x.

Therefore, Lim x-3 = (3+δ)-3 = δ = 1 en x→3⁺ |x-3| |(3-δ)-3| |δ|

 Lim x-3 = (3-δ)-3 = -δ r x→3⁻ |x-3| |3-δ)-3| δ

1. F(x) = root of x-4 Substituting 4 for x f(x) = root (4)-4 =0 Substituting 8 for x f(x) = root (8)-4 =2

X 4 5 6 7 8

F(x) 0 1.0 1.41 1.73 2