8. Find the real root of $x^3 - 2x - 5 = 0$

Soln: $f(2) = 8 - 4 - 5 = -1$

$f(3) = 27 - 6 - 5 = 16$

n	(−) a	(+) b	$x = \frac{a+b}{2}$	f(x)
1	2	3	2.5	5.625 > 0
2	2	2.5	2.25	1.8906 > 0
3	2	2.25	2.125	0.3457 > 0
4	2	2.125	2.0625	−0.3513 < 0
5	2.0625	2.125	2.09375	−0.0089 < 0
6	2.09375	2.125	2.10938	0.1668 > 0
7	2.09375	2.10938	2.10156	0.07856 > 0
8	2.09375	2.10156	2.09766	0.03471 > 0
9	2.09375	2.09766	2.09570	0.01286 > 0
10	〃	2.09570	2.09473	0.00195 > 0
11	〃	2.09473	2.09424	

∴ Root = 2.094