King Saud University Third Semester	Department of Mathematics First Short Exam	Math-254 1444 <b>AH</b>
	s. Group No. ——-	Max Marks=10
Name of the Student:-	ID. No	<u>-</u>
Questions:		(4+3+3)

- (1) Use Newton's method to find second approximation to the 3rd root of 29, taking an initial approximation  $x_0 = 3$ . Compute the absolute error. Use 5 d.p. accuracy.
- (2) Use Secant method to find the second approximation of the intersection point (x, y) of the graphs  $y_1 = -\sqrt{x}$  and  $y_2 = \ln x$ , when  $x_0 = 0.1$  and  $x_1 = 1$ . Use 4 d.p. accuracy.
- (3) Use the best method to find the second approximation  $x_2$  to the multiple root of the nonlinear equation  $f(x) = 1 \cos x = 0$ , using  $x_0 = 0.2$ . Work with 5 d.p. accuracy.

--- Good Luck ---

Start your solutions from here ....