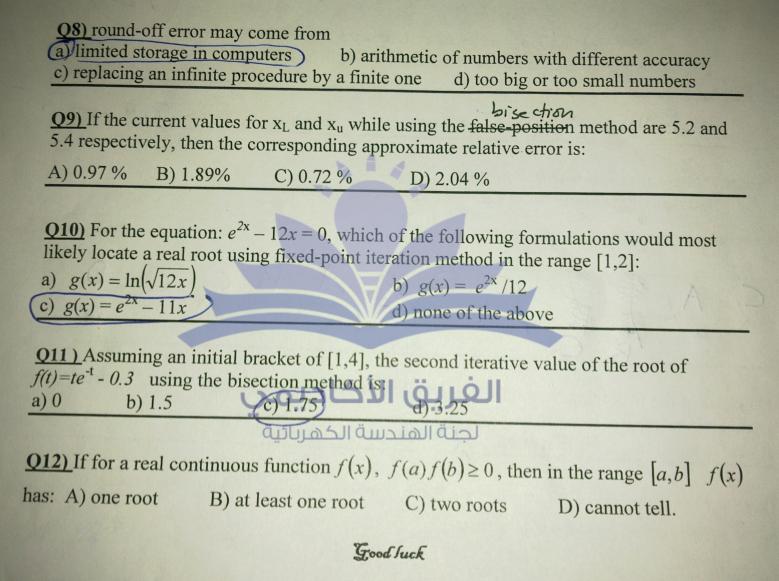
Q1) One of the following methods does <u>NOT</u> utilize the linear behavior of the function in the root searching domain: A) False position B) Bisection C) Newton D) Secant
Q2) For finding the root of $f(x) = \cos x - 0.1$ by the secant method, the following choice of initial guesses would <u>NOT</u> be appropriate:
A) $\frac{\pi}{4}$ and $\frac{\pi}{2}$ B) $\frac{3\pi}{4}$ and $\frac{5\pi}{4}$ C) $-\frac{\pi}{3}$ and $\frac{\pi}{4}$ D) $\frac{\pi}{3}$ and $\frac{\pi}{2}$
Q3) Given the linear system: $2x_1 + x_2 = 3$, $x_1 + ax_2 = b$. What values of a and b that make the system with infinite solutions: A) $a=2/3$ and $b=1$ B) $a=1/2$ and $b=3/2$ C) $a=1/2$ and $b\neq 3/2$ D) $a=1/3$ and $b=3/2$
Q4) If the root of $f(x) = x^2 + \cos(x)$ is estimated using Newton's method with $x_0 = 0.1$, he value of x_1 will be: A 15.2 B) -3.13 C -2.23 D) -9.93
25) If $f(x) = ax - \ln bx$, where a and b are positive constants, then $f(x)$ has real roots nly when: A) $b/a \ge a$ B) $a \ge b$ C) $a \ge \ln b$ D) $ab \ge 1$
The matlab command (>> $t = 1:0.25:2.0$) would generate a vector t with dimension quals to: A) 4 B) 7 C) 2 D) 5
The truncation error of estimating $\sin(\pi/6)$ using second order Taylor expansion cound zero equals: A) 1.95 % B) 15.56% C) 4.72 % D)23.04 %

Q



c) replacii	storage in one of the storage in of the storage in stor	te procedure by a		d) too	big or too si	fferent accurace mall numbers
Q2) If the 5.2 respec	current val	ues for x_L and x_u the corresponding	while using	the false	section me- e-position me ve error is:	nethod are 5.1
		0% C) 0.72 9				
likely loca a) $g(x) =$	ate a real root $\ln(\sqrt{10x})$	$e^{2x} - 10x = 0, w$ of using fixed-po	int iteration by g(.	$method i$ $x) = e^{2x}$	in the range /10	ons would mos [1,2]:
$\underline{\text{(c)}} g(x) =$	$e^{-x}-9x$		a) noi	ne of the	above	
Q4) Assu	ming an ini	tial bracket of [1	,4], the secon	d iterati	ve value of	the root of
		he bisection met				
$f(t) = te^{x} - 0$	b) 1.5	(c))1.75		3.25		
a) 0 Q5) If for	b) 1.5 a real conti	inuous function B) two roots	f(x), f(a)f C) no roo	(b) < 0,	then in the D at least of	
(a) 0 (Q5) If for has: A) or	a real contine root	(c))1.75	f(x), f(a)f C) no roc	f(b) < 0, ts	D) at least o	one root.