姓名: SOLUTION 葉均承 應數三數值分析

學號: _____ **Quiz 1** 考試日期: 2020/10/06

1. 請框出答案. 2. 不可使用手機，禁止作弊!

1. (50%) 配對方法與名稱：

| | |
|---|---|
| B | `while abs(f(p)) > tol:`<br>`  p = (a+b)/2`<br>`  if f(a) * f(p) <0:`<br>`  a = a`<br>`  b = p`<br>`  elif f(b) * f(p) <0:`<br>`  a = p`<br>`  b = b` |
| D | `while abs(f(p)) > tol:`<br>`  p=p1-f(p1)*(p1-p0)/(f(p1)-f(p0))`<br>`  p0=p1`<br>`  p1=p` |
| C | `while abs(p-f(p)) > tol:`<br>`  p= f(p)` |
| A | `while abs(f(p)) > tol:`<br>`  p=p0-f(p0)/Df(p0)`<br>`  p0=p` |

A. Newton's Method
B. The Bisection Method
C. The Fixed Point Method
D. The Secant Method

2. (50%) Let $x = 1/3$, $y = 4/7$. Find $x \oslash y = fl(fl(x) \div fl(y))$ by using 4-digit chopping arithmetic.

**Answer:**
$x \oslash y = fl(fl(x) \div fl(y)) = fl(fl(0.\overline{3}) \div fl(0.\overline{571428})) = fl(0.3333 \div 0.5714)$
$= fl(0.5833041652) = 0.5833$