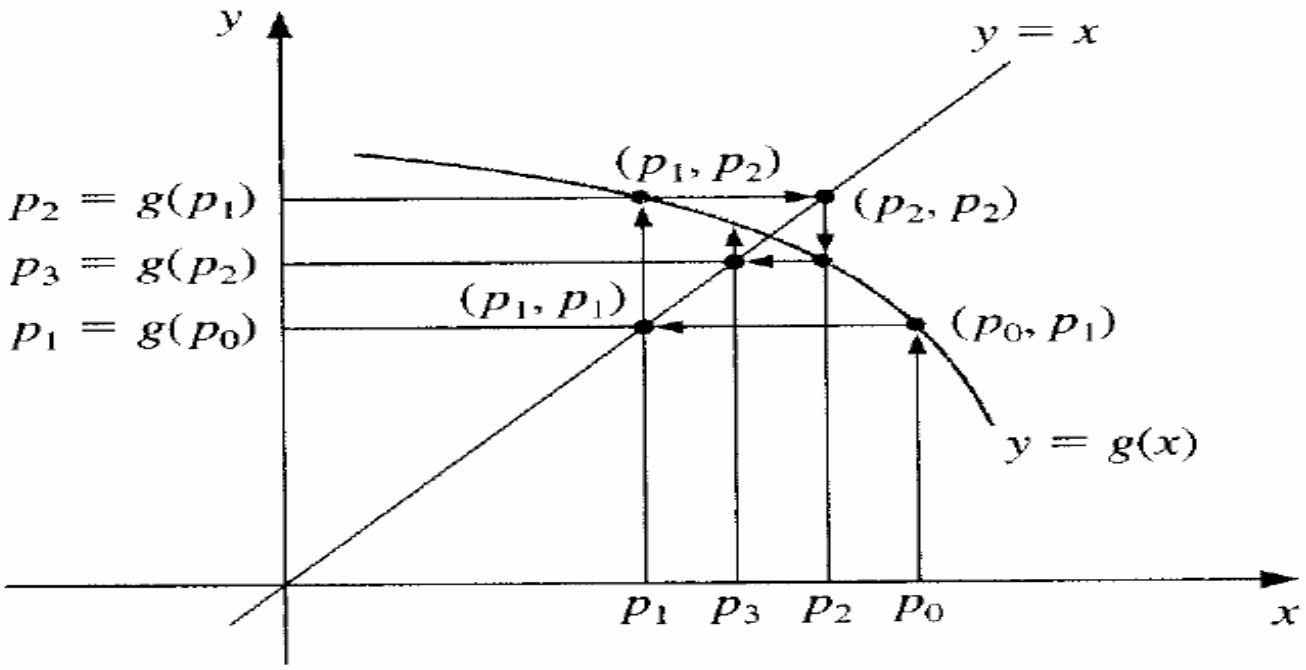

(a)

Fixed-Point Iteration

To find a solution to **p** = g(**p**) given an initial approximation **p0**.

INPUT **p0**; tolerance **TOL**; maximum number of iteration **N0**.

OUTPUT solution **p** or message of failure

STEP1 Set i = 1.

STEP2 While i ≤ N0 do Steps 3-6

STEP3 Set **p** = g(**p0**).

STEP4 If |**p**-**p0**| < **TOL** then

OUTPUT(p);

STOP.

STEP5 Set i = i + 1.

STEP6 Set **p0** = **p**.

STEP7 OUTPUT("The method failed after **N0** iterations");

STOP.