X=5/ (X^2 - 2) X=2

X^3 – 2X = 5

**Form 1**

**Y=X**

**Y= 5/ (X^2 - 2)**

**Xn+1=5/ (Xn^2 – 2) Xn=2 n=0 Xo=2**

**X1= 5/(Xo^2 - 2)**

 **=5/(2^2 - 2) = 5/ (2 ) = 2.5**

**X2= 5/(X1^2 - 2) = 5 /(2.5 ^ 2 - 2) =1.176**

**X3= 5/(X2^2 - 2)= 5 /(1.176 ^ 2 - 2) = -8.103**

**Form 2**

**X= (2X + 5) ^1/3 X=2**

**X1= (2 X0 + 5 )^ 1/3 X0=2**

 **= 2.080**

**X2= 2.092**

**X3= 2.0945**

**X4= 2.0945**

**0= X^3 – 2x -5**

**X=1/2(X^3 - 5) ----- eq 1**

X=5/ (X^2 - 2) ------ eq 2

**Newton Raphson method**

**2X = X^3 – 5**

**0= X^3 – 2x -5**

**F(x)=0**

**F(x) = X^3 – 2x -5= 8 – 4 - 5**

**F’(X) = 3x^2 – 2**

**X0 = 2**

**X1= Xo – F(x0)/F’(x0)**

 **= 2- (-1)/(10) = 2.1**

**X2= 2.094**

**X3=**

**0= X^3 – 2x -5**

**X= (x^3 +5)/2**

 X^3- 3x -20 =0 x0=0.3

1. X= (X^3 – 20) / 3 sabir X1= -6.65 X2= -104.69 X3
2. X= (3x +20)^1/3 Humaiyoun

 X1= 2.7545 X2= 3.0460 x3=3.077 x4=3.080 x5=3.0808

1. X = 20 /(X^2 - 3)

Bisection method

8 x^ 3 + 8X – 5 =0

X0=0.3

x1=0.6

F(x)= 8 x^ 3 + 8X – 5 F(0.506)= 0.0844

F(0.496)= -.05

F(x0) = - 2.384

F(x1) = 1.528

F(x0) \* F(x1) <0 true

X2= (x0+x1)/2= 0.3+0.6/2 = 0.45

X2=0.45

X3=0.525

X4=0.4875

X5= 0.506

X6=0.496