

Work sheet-1

1. Using the Bisection method find the solution to the cubic equation $x^3 + 4x^2 - 10 = 0$
Use the starting interval $[a, b] = [-1, 2]$.
 2. Using the False position method find the solution to the cubic equation $x^3 + 4x^2 - 10 = 0$
Use the starting interval $[a, b] = [-1, 2]$.
 3. Using the Fixed point iteration technique find the solution to $x = g[x] = \frac{x^2}{4} + \frac{x}{2}$
Use the starting approximations $p_0 = 2.03$ first and then $p_0 = 1.95$
 4. Using the Newton- Raphson method find the solution to $\text{ArcTan}[x] = 0$. Use the starting approximation $p_0 = 1.35$.
 5. Using the Secant method find the solution to $\text{ArcTan}[x] = 0$. Use the starting approximations $p_0 = 1.35$ and $p_1 = 1.30$.
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