

```

59         i += 1
60         converged = (function.call(x1).abs <= err)
61         puts "iteration count #{i}\nx0 = #{x0}\nx1 = #{x1}"
62         if converged
63             break
64         end
65     end
66 end
67 return x1
68 end
69
70 # inputs
71 function = Proc.new {|x| x**2 - 612.0 }
72 derivative = Proc.new {|x| 2*x}
73 initialGuess = 20.0
74 error = 0.05
75
76 # result
77 puts execute_newton_raphson function, derivative, initialGuess, error
78

```

OUTPUT TERMINAL DEBUG CONSOLE PROBLEMS

```

crowjambo@crowjamIMAC task2 % ruby newtonMethod.rb
iteration count 1
x0 = 25.3
x1 = 25.3
iteration count 2
x0 = 24.744861660079053
x1 = 24.744861660079053
iteration count 3
x0 = 24.738634537440753
x1 = 24.738634537440753
24.738634537440753
crowjambo@crowjamIMAC task2 % █

```

```

73
74         if converged
75             break
76         end
77     end
78
79     return x2
80
81 end
82
83 # inputs
84
85 function = Proc.new {|x| x**2 - 612 }
86 lower = 10.0
87 upper = 30.0
88 error = 0.05
89
90 # result
91 puts(execute_bisection_method function, lower, upper, error)
92
93

```

```

function = Proc.new {|x| x**2 - 612 }
lower = 10.0
upper = 30.0
error = 0.05

# result
puts(execute_bisection_method function, lower, upper, error)

```

OUTPUT TERMINAL DEBUG CONSOLE PROBLEMS

```

crowjambo@crowjamIMAC task2 % ruby bisectionAlgo.rb
24.73876953125
crowjambo@crowjamIMAC task2 % 

```