In[1]:=
```
NewtonMethod[p0_, e0_, n_] :=
 Module[{},
  p = N[p0];
  e = N[e0];
  i = 0;
  output = {{i, p}};
  While[i < n,
   p1 = p - f[p] / f'[p];
   output = Append[output, {i + 1, p1}];
   If[Abs[p1 - p] < e, Print["Condition Exists at ", i + 1, "."]; Break[]];
   p = p1;
   i = i + 1;
  ];
  Print[NumberForm[TableForm[output,
     TableHeadings → {None, {"i", "p"}}], 16]];
  Print["p = ", NumberForm[p1, 16]];
 ]
f[x_] := x^3 + 2 x^2 - 3 x - 1;
Print["f(x) = ", f[x]];
NewtonMethod[1, 10^-5, 10]
```

$f(x) = -1 - 3x + 2x^2 + x^3$

Condition Exists at 4.

i	p
0	1.
1	1.25
2	1.200934579439252
3	1.198695841064738
4	1.198691243535371

p = 1.198691243535371