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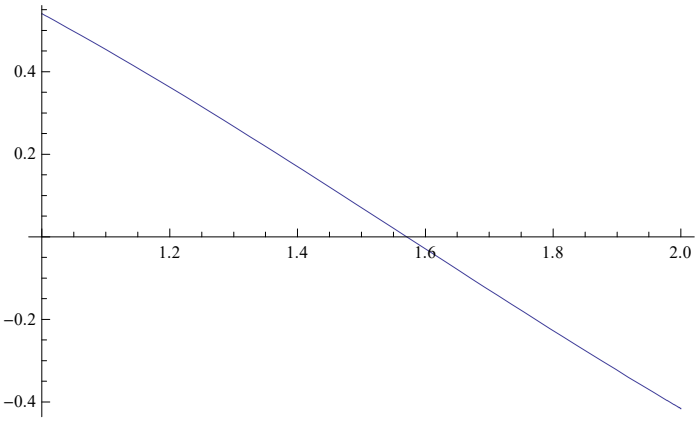
Practical: Secant Method

In[1]:=

```
f[x_] := Cos[x];
Plot[f[x], {x, 1, 2}]
x1 = 1;
x2 = 2;
For[i = 1, i ≤ 10, i += 1, x3 = N[x2 - (x2 - x1) * (f[x2] - f[x1]) * f[x2]];
 x1 = x2;
 x2 = x3;
 Print[{i, x1, x2}]]
```

Out[2]=




```
{1, 2, 1.60198}
{2, 1.60198, 1.5972}
{3, 1.5972, 1.5972}
{4, 1.5972, 1.5972}
{5, 1.5972, 1.5972}
{6, 1.5972, 1.5972}
{7, 1.5972, 1.5972}
{8, 1.5972, 1.5972}
{9, 1.5972, 1.5972}
{10, 1.5972, 1.5972}
```