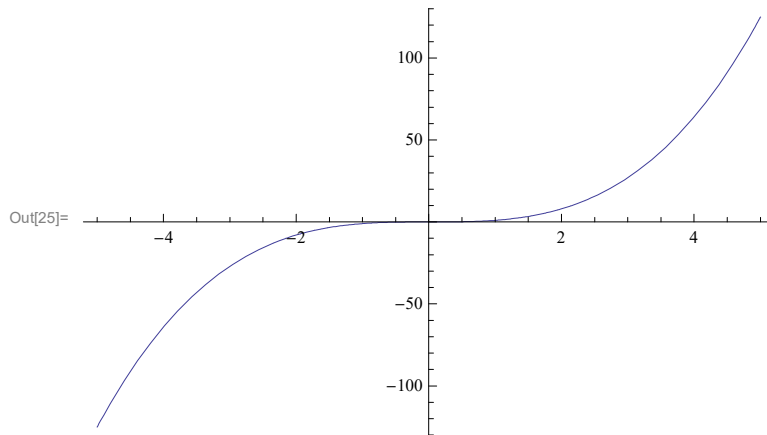# Name: Abhishek Verma
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Practical: Newton Raphson Method

In[24]:=

```
f[x_] := x^3
Plot[f[x], {x, -5, 5}]
```

Out[25]=

In[30]:=

```
a = Input["the choice of the initial point"]
Nmax = Input["the number of maximum iteration"]
tol = Input["enter the tolerance value"]
For[i = 1, i ≤ Nmax, i = i + 1, b = N[a - f[a] / f'[a]];
  Print["the iterative value of the", i, "th iteration is", b];
  If[Abs[b - a] < tol, Break[]]; a = b]
```

Out[30]= 3

Out[31]= 10

```
RowBox[{0, ,, 001}]
```

the iterative value of the1th iteration is2.

the iterative value of the2th iteration is1.33333

the iterative value of the3th iteration is0.888889

the iterative value of the4th iteration is0.592593

the iterative value of the5th iteration is0.395062

the iterative value of the6th iteration is0.263374

the iterative value of the7th iteration is0.175583

the iterative value of the8th iteration is0.117055

the iterative value of the9th iteration is0.0780369

the iterative value of the10th iteration is0.0520246