In[•]:=
```
f[x_] := x^2 - 6 x + 9;
grad[x_] := 2 x - 6;
xold = 2;
learningRate = 0.1;
iterations = 10;
For[i = 1, i ≤ iterations, i++,
 xnew = xold - learningRate * grad[xold];
 xold = xnew;
 Print["Iteration ", i, " : x = ", xnew, " f(x) = ", f[xnew]]]
Print["Minimum Value ", f[xnew] , " achieved at x = ", xnew]
```

```
Iteration 1 : x = 2.2 f(x) = 0.64

Iteration 2 : x = 2.36 f(x) = 0.4096

Iteration 3 : x = 2.488 f(x) = 0.262144

Iteration 4 : x = 2.5904 f(x) = 0.167772

Iteration 5 : x = 2.67232 f(x) = 0.107374

Iteration 6 : x = 2.73786 f(x) = 0.0687195

Iteration 7 : x = 2.79028 f(x) = 0.0439805

Iteration 8 : x = 2.83223 f(x) = 0.0281475

Iteration 9 : x = 2.86578 f(x) = 0.0180144

Iteration 10 : x = 2.89263 f(x) = 0.0115292

Minimum Value 0.0115292 achieved at x = 2.89263
```