In[1]:=
```
(* single slit pattern then double slit *)
```

In[2]:=
```
a = 4.05 * 10 ^ (-6)
```

Out[2]= 4.05×10^{-6}

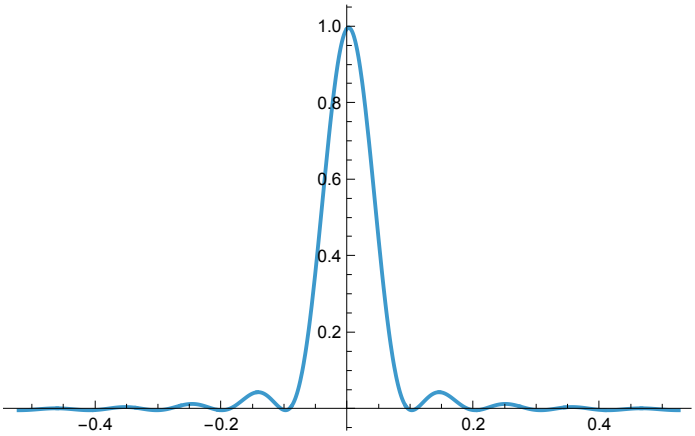
In[3]:=
```
λ = 405 * 10 ^ (-9)
```

Out[3]= $\frac{81}{200\,000\,000}$

In[4]:=
```
Intensity1[θ_] := (Sin[Pi * a * Sin[θ] / λ] / (Pi * a * Sin[θ] / λ)) ^ 2
```

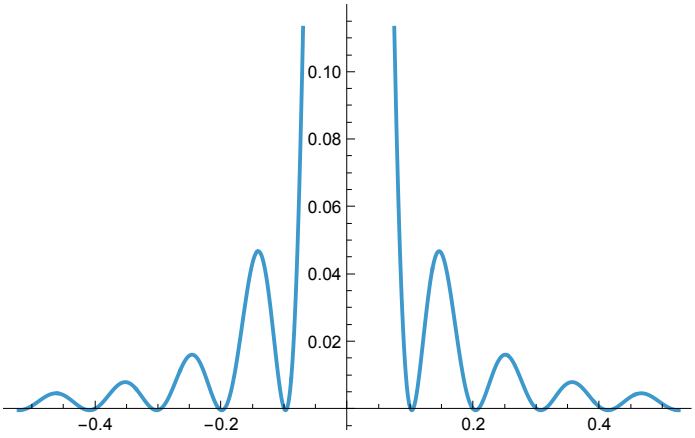
In[5]:=
```
Plot[Intensity1[θ], {θ, -Pi / 6, Pi / 6}, PlotRange → Full]
```

Out[5]=



In[6]:=
```
Plot[Intensity1[θ], {θ, -Pi / 6, Pi / 6}]
```

Out[6]=



In[7]:=
```
(* now double slit pattern *)
```

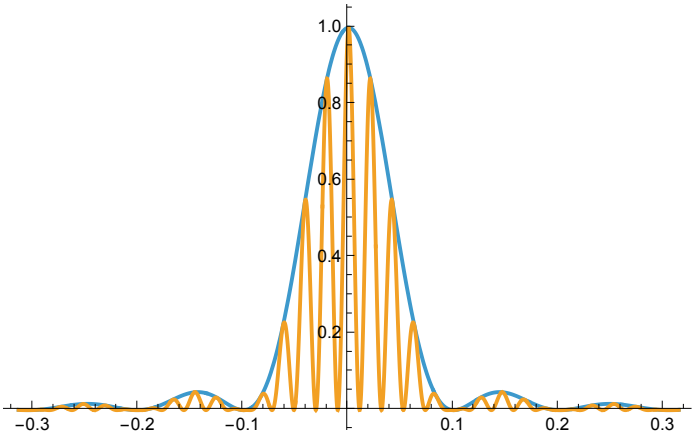
In[8]:=
```
d = 1.944 * 10 ^ (-5)
```

Out[8]= 0.00001944

In[9]:=
```
Intensity2[θ_] := Intensity1[θ] * Cos[Pi * d * Sin[θ] / λ] ^ 2
```

In[10]:=
```
Plot[{Intensity1[θ], Intensity2[θ]}, {θ, -Pi / 10, Pi / 10}, PlotRange → Full]
```

Out[10]=



In[12]:=
```
Plot[{Intensity1[θ], Intensity2[θ]}, {θ, 0.03, 0.25}, PlotRange → Full]
```

Out[12]=