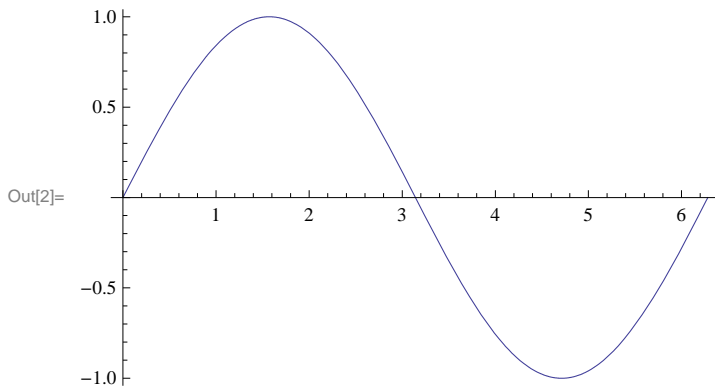


In[1]:= (*This is the same integration that failed in Mathcad*)

a1[x_] := Sin[x]

In[2]:= Plot[a1[x], {x, 0, 2 Pi}]



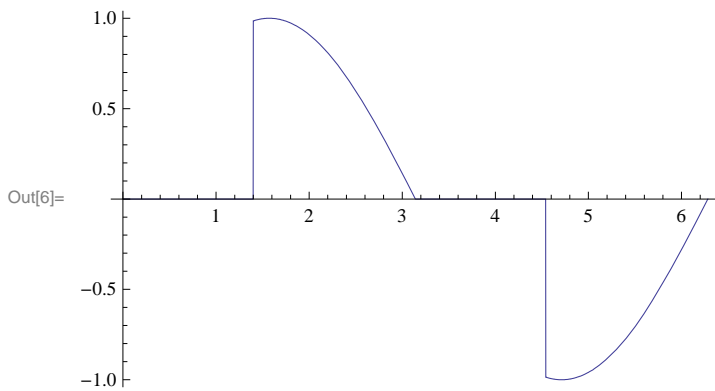
In[3]:=

In[4]:= a2[x_, d_] := If[x < d || (x > Pi && x < (d + Pi)), 0, a1[x]]

In[5]:= d = 1.4

Out[5]= 1.4

In[6]:= Plot[a2[x, d], {x, 0, 2 Pi}]



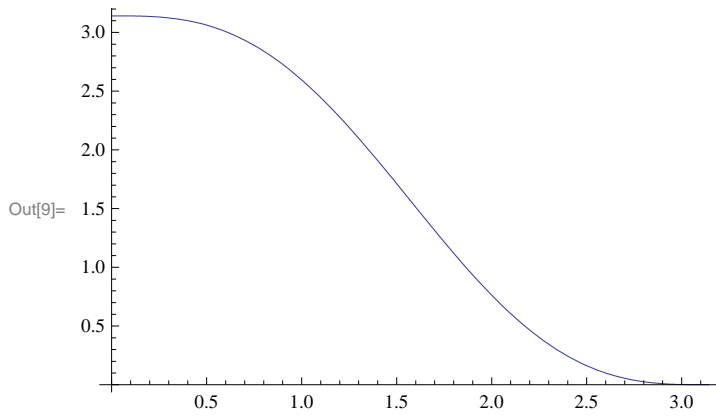
In[7]:=

(* This integral goes from 0 to 2 PI *)

a3[d_] := NIntegrate[a2[x, d]^2, {x, 0, 2 Pi}]

In[8]:=

```
In[9]:= Plot[a3[d], {d, 0, Pi}]
```



```
In[10]:=
```

```
(* And this integral goes from 0.01 to 2PI *)
```

```
In[11]:= a4[d_] := NIntegrate[a2[x, d]^2, {x, 0.01, 2 Pi}]
```

```
In[12]:= Plot[a4[d], {d, 0, Pi}]
```

