The first three digits of your Student Identification Number specify an integer. As your first Input statement to be evaluated, set id equal to that integer. Thus, if your Student Identification Number were 123-45-6789, you would write and evaluate id = 123 as your first line of Input. Then, your first Input and Output would look like

```
In[1]   id = 123
Out[1]  123
```

Throughout, write t in place of \( \theta \).

Problem 1. Have MATHEMATICA evaluate one at a time each of the six Input statements that are given in terms of typewriter characters by

```
<<Graphics'Graphics'
<<Miscellaneous'RealOnly'

h[t_] := t /; t >= 0 (*This should give h[3]=3*)

h[t_] := 0 /; t < 0 (*This should give h[-4]=0*)

f[t_] = id*h[ Sin[4*t] ]^(1/17) (*This should give f[Pi/8]=id*)

PolarPlot[ f[t], {t, 0, 2*Pi} ]
```

(where ' appears on the key to the left of 1) and sketch the corresponding polar plot that MATHEMATICA gives as Output for the last Input.

Output:

Problem 2. Print a MATHEMATICA Input statement (in InputForm) as well as the corresponding Output statement for the purpose of using \texttt{NIntegrate} to find the area of any one of the four petals of the preceding polar curve.

Input:

Output: