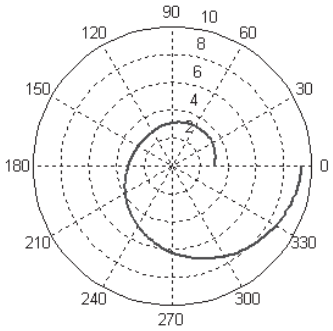
For example, a plot of the function $r = 3\cos^2(0.5\theta) + \theta$ for $0 < \theta < 2\pi$ is shown below.

```
t=linspace(0,2*pi,200);
r=3*cos(0.5*t).^2+t;
polar(t,r)
```

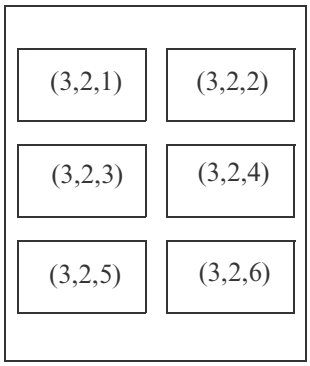


5.10 PUTTING MULTIPLE PLOTS ON THE SAME PAGE

Multiple plots can be created on the same page with the `subplot` command, which has the form:

```
subplot(m,n,p)
```

The command divides the Figure Window (and the page when printed) into $m \times n$ rectangular subplots. The subplots are arranged like elements in an $m \times n$ matrix where each element is a subplot. The subplots are numbered from 1 through $m \cdot n$. The upper left subplot is numbered 1, and the lower right subplot is numbered $m \cdot n$. The numbers increase from left to right within a row, from the first row to the last. The command `subplot(m,n,p)` makes the subplot `p` current. This means that the next plot command (and any formatting commands) will create a plot (with the corresponding format) in this subplot. For example, the command `subplot(3,2,1)` creates six areas arranged in three rows and two columns as shown, and makes the upper left subplot current. An example of using the `subplot` command is shown in the solution of Sample Problem 5-2.



5.11 MULTIPLE FIGURE WINDOWS

When `plot` or any other command that generates a plot is executed, the Figure Window opens (if not already open) and displays the plot. MATLAB labels the Figure Window as Figure 1 (see the top left corner of the Figure Window that is displayed in Figure 5-4). If the Figure Window is already open when the `plot` or any other command that generates a plot is executed, a new plot is displayed in the Figure Window (replacing the existing plot). Commands that format