**Using the Document:** Polar\_Graphs.tns

This tns file is used to practice plotting and visualizing points in the plane represented by the polar coordinates . The polar grid lines with common angles are displayed. Pages 2 and 3 are used to plot polar functions of the form .

**Suggested Applications and Extensions**

Use Page 1.2 to help answer the following questions.

1. Plot the point whose polar coordinates are given. Find two other pairs of polar coordinates for this point, one with  and one with .

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| (a) |  | (b) |  | (c) |  |
| (d) |  | (e) |  | (f) |  |

1. Plot the point whose polar coordinates are given. Find the Cartesian coordinates of the point.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| (a) |  | (b) |  | (c) |  |
| (d) |  | (e) |  | (f) |  |

Use page 2.2 or 3.2 to sketch the graph of  as a function of . Describe the shape of the graph.

1. 
2. 
3. 
4. 
5. 
6.  What values of  produce a complete polar graph?
7. 
8. , 
9. 
10. 