

Use symmetry, zeros, and maximum r -values to graph each function.

$$r^2 = 16 \sin 2\theta$$

1) Complete the Table:

θ	0	$\frac{\pi}{12}$	$\frac{\pi}{6}$	$\frac{\pi}{4}$	$\frac{\pi}{3}$	$\frac{5\pi}{12}$	$\frac{\pi}{2}$
r							
r							

2) Identify the type of Symmetry:

a) Polar axis

b) Line $\theta = \frac{\pi}{2}$

c) Pole

3) Identify the type of Graph:

a) Circle

b) Limacons

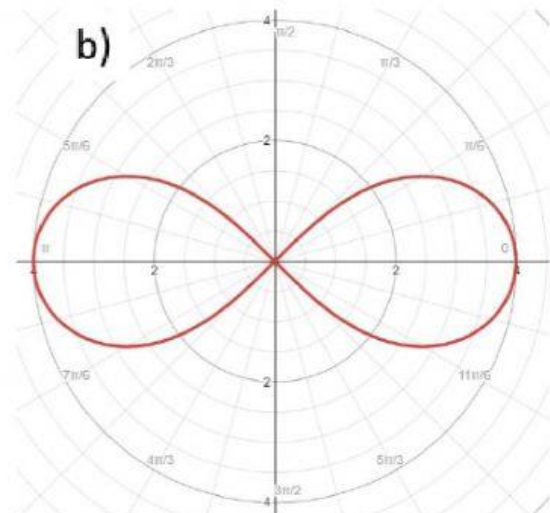
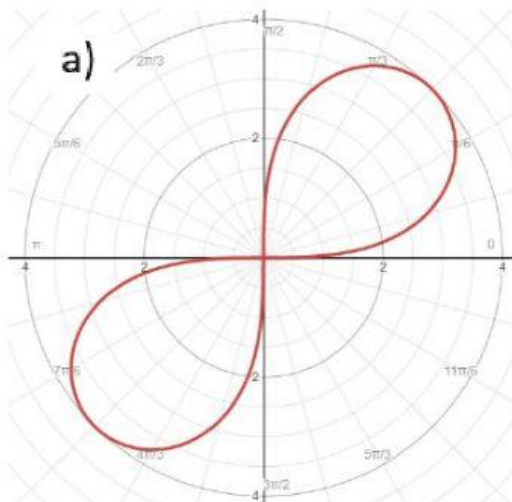
c) Rose

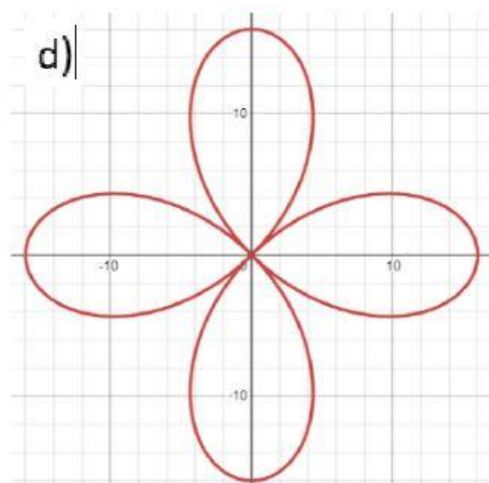
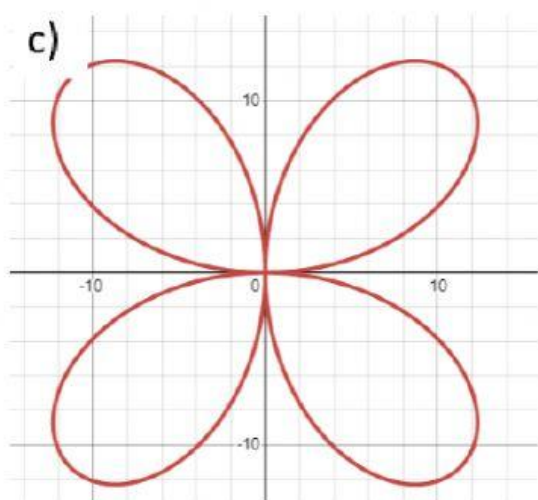
d) Spiral of Archimedes

e) Lemniscates

4) What is the Maximum value?

5) Identify the graph:





$$r = 3\theta$$

1) Complete the Table:

θ	0	$\frac{\pi}{4}$	$\frac{\pi}{2}$	π	$\frac{3\pi}{2}$	2π	3π	4π
r								

2) Identify the type of Symmetry:

- a) Polar axis
- b) Line $\theta = \frac{\pi}{2}$
- c) Pole

3) Identify the type of Graph:

- a) Circle
- b) Limacons
- c) Rose

d) Spiral of Archimedes

e) Lemniscates

4) What is the Maximum value?

5) Identify the graph:

