

Lab 13 - Polar Graphs

On the graph paper that is attached, sketch a graph of each of these functions, as shown by Maple.

Page 1: Limaçons

a. $r = 1 - 2 \cos \theta$

b. $r = 1 - 2 \sin \theta$

c. $r = 3 - 2 \cos \theta$

d. $r = 3 - \cos \theta$

Page 2: Cardioids

a. $r = 2 - 2 \cos \theta$

b. $r = 2 + 2 \cos \theta$

c. $r = 2 - 2 \sin \theta$

d. $r = 2 + 2 \sin \theta$

Page 3: Cosine Rose Curves

a. $r = 2 \cos \theta$

b. $r = 2 \cos 2\theta$

c. $r = 2 \cos 3\theta$

d. $r = 2 \cos 4\theta$

Page 4: Sine Rose Curves

a. $r = 2 \sin \theta$

b. $r = 2 \sin 2\theta$

c. $r = 2 \sin 3\theta$

d. $r = 2 \sin 4\theta$

Page 5: Lemniscates

a. $r^2 = \cos 2\theta$

b. $r^2 = 4 \cos 2\theta$

c. $r^2 = \sin 2\theta$

d. $r^2 = 4 \sin 2\theta$









