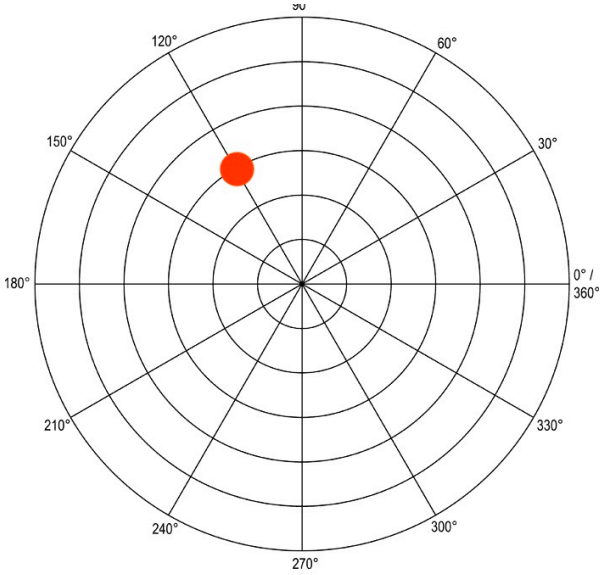
Polar Graphs and Derivatives Handout

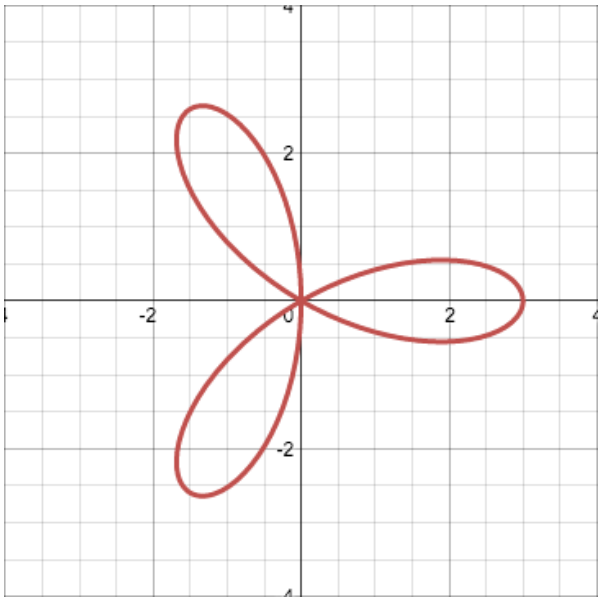
Jon, Macken, and Toby

January 6, 2016

1. Which of the following is the proper polar coordinate representation of the point marked on the axis on the right?
    a. (3,120°)
    b. (120°,3)
    c. (-3,330°)
    d. (4,120°)
    e. (3,-210°)



2. Which of the following is the correct polar equation for the graph on the right?
    a. r = 3 + 3*cos(θ)
    b. r = 3 + 3*sin(θ)
    c. r = 3*cos(3θ)
    d. r = 3*sin(θ)
    e. r = 3



3. What kind of graph is r = 2 + 3*sin(θ)?
    a. Rose curve
    b. Dimpled Limaçon
    c. Limaçon with an inner loop
    d. Cardiod
    e. Spiral

4. What is the slope of the polar equation r = 5*cos(θ) when θ = π/8?
    a. -2
    b. -1
    c. 0
    d. -1
    e. 2

5. At what value of θ does the left-most point of the graph of r = 3 + 5*sin(θ) occur?
    a. 0.610
    b. 5.222
    c. 4.203
    d. 2.532
    e. 3.141

Answer key: 1: a 2: c 3: c 4: b 5: d