

MTH 2227 - HW #2 Graphing Equations in Polar Coordinates

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Pat Rossi

Name _____

The equations below relate r as a function of θ . Graph the equations.

1. $r = 3$

2. $r = 4 \sin(\theta)$

Plot values of r for the “standard values of θ ,” using the approximations: $\sqrt{2} \approx 1.4$ and $\sqrt{3} \approx 1.73$

3. $r = 3 - 2 \sin(\theta)$

We will plot values of r for the “standard values of θ ,” using the approximations: $\sqrt{2} \approx 1.4$ and $\sqrt{3} \approx 1.7$

4. $r = 6 \sin(\theta)$

We will plot values of r for the “standard values of θ ,” using the approximations: $\sqrt{2} \approx 1.4$ and $\sqrt{3} \approx 1.7$

5. $r = 1 - \cos(2\theta)$ Plot using the regular Polar Grid. Plot only the points corresponding to the whole number multiples of $\theta = \frac{\pi}{18}$, for $0 \leq \theta \leq \pi$

6. $r = 3 \cos(\theta)$

7. $r = 2 \cos(3\theta)$ Plot using “Polar Grid to use with sin/cos of 3 theta” on my website.

Plot only the points corresponding to the whole number multiples of $\theta = \frac{\pi}{18}$, for $0 \leq \theta \leq \pi$

8. $r = 1 - \sin(\theta)$

9. $r = 2 \sin(2\theta)$ Plot using “Polar Grid to use with sin/cos of 2 theta” on my website.

Plot only the points corresponding to the whole number multiples of $\theta = \frac{\pi}{12}$, for $0 \leq \theta \leq 2\pi$

10. $r = 3 + 2 \sin(\theta)$