

Precalculus with Trigonometry • Day 111 Supplement

Lesson 13.2 • Polar Equations of Conics and Other Curves

Getting Started

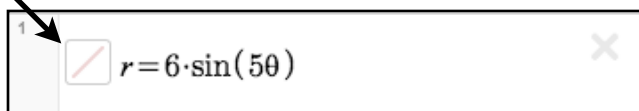
Go here: <http://fcsmath.fresnochristian.com>

Click on these:

- ◆ *Online Resources*
- ◆ *Desmos Links*
- ◆ *PC Day 111 Supplement*

Turning Graphs On and Off

Click the diagonal line to the left of the expression to toggle graphs on and off.



This allows you temporarily to hide some graphs (without deleting/losing them) in order to focus on others.

Graphing in Polar with Desmos

To graph $r = 6 \sin(5\theta)$, type this:

$$r = 6 \sin(5\theta)$$

Desmos will automatically convert “theta” to θ .

Boss of the Domain

Want to control the domain? Type something like this:

$$r = \{ 0 \leq \theta \leq 1 : \text{blah blah blah} \}$$

Desmos will convert \leq into \leq , free of charge!

This will limit the domain of the graph to $0 \leq \theta \leq 1$.

Experiment with other right endpoints (2, 3.14, etc.)

Using Sliders

Want to quickly and easily change the left and right endpoints of the domain? Throw in a slider!

Instead of typing specific numbers in the inequality, type in variables, like so:

$$r = \{ a \leq \theta \leq b : \text{blah blah blah} \}$$

Discussion Preparation

Start a new blank graph.

1. Plot this: $r = 6 \sin(5\theta)$

Describe what you see.

2. Plot this: $r = 4 \cos \theta$

Describe what you see.

3. Plot this: $r = 5 \sec \theta$

Describe what you see.