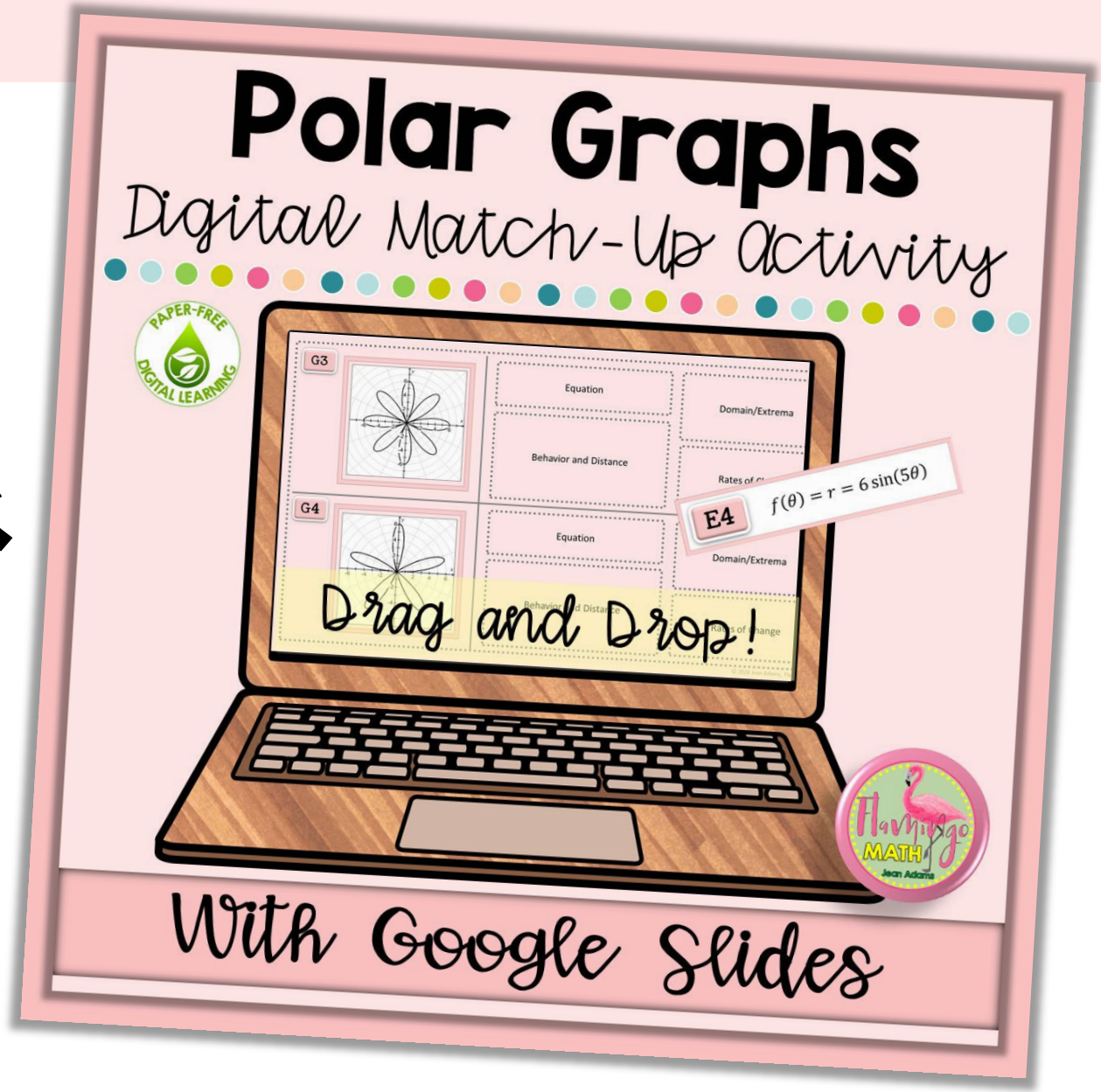
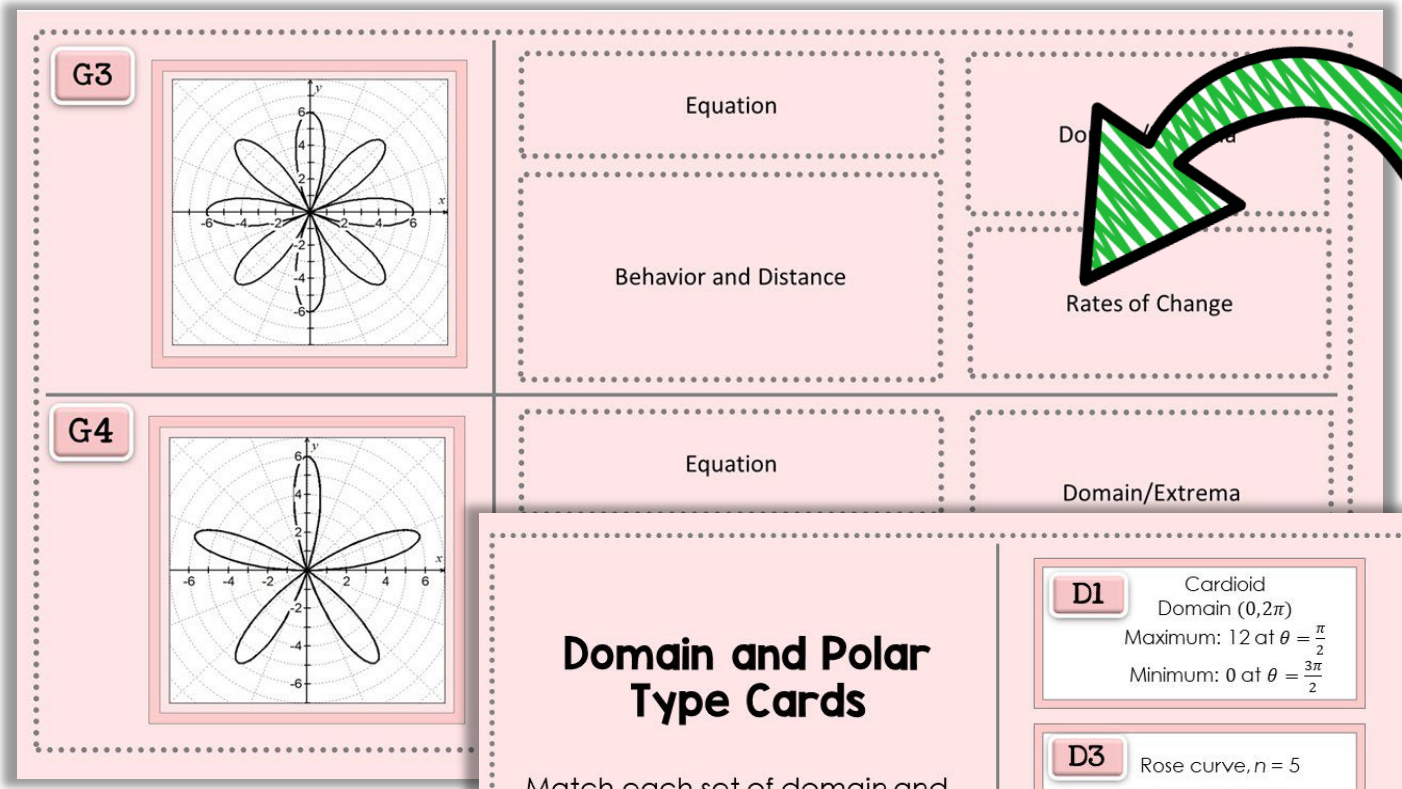
Precalculus students will love these Google Slides™ Polar Graphs Match-Up Activity

Drag and Drop
Digital Fun
with No Prep!

Take a look inside!



Every graph in the Google Slide is a unique curve with matching drag-and-drop cards.



Students have 8 polar curves to match with 4 categories in a drag-and-drop format.

Domain and Polar Type Cards

Match each set of domain and type of polar curve on this slide with the appropriate graph card.

Copy the card and paste into the text box to match all domains of the polar function to their correct graph and equation card.

D1 Cardioid
Domain $(0,2\pi)$
Maximum: 12 at $\theta = \frac{\pi}{2}$
Minimum: 0 at $\theta = \frac{3\pi}{2}$

D2 Limaçon with inner loop
Domain $(0,2\pi)$
Maximum: 9 at $\theta = 0$
Minimum: -3 at $\theta = \pi$

D3 Rose curve, $n = 5$
Domain $(0,\pi)$
Extrema $|6|$ at $\theta = \frac{\pi}{10} + \frac{\pi}{5}n$

D4 Convex limaçon
Domain $(0,2\pi)$
Extrema 7 at $\theta = \frac{3\pi}{2}$

D5 Circle
Domain $(0,\pi)$
Extrema 5 at $\theta = 0$

D6 Rose curve, $n = 3$
Domain $(0,\pi)$
Extrema $|6|$ at $\theta = 0 + \frac{\pi}{3}n$

D7 Spiral
Domain $(0,\infty)$
Minimum: 0 at $\theta = 0$

D8 Rose curve, $n = 4$
Domain $(0,2\pi)$
Extrema $|6|$ at $\theta = \frac{\pi}{8} + \frac{\pi}{4}n$

© 2024 Jean Adams, Flamingo Math™

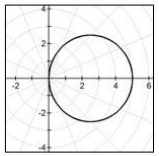
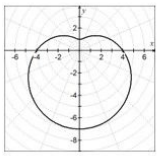
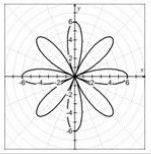
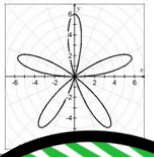
Flamingo MATH Jean Adams

There is a BONUS cut-and-paste paper version of the matching activity.

Polar Graph Cut and Paste

Name _____

Directions: Cut the cards and match to each of the eight (8) polar curves.

G1	G2	G3	G4
			
Equation	Equation	Equation	
Domain/Type	Domain/Type	Domain/Type	main/Type
Rates of Change			
Behavior/Direction			

Polar Graphs Cut and Paste Activity

Directions: Students will cut the cards on the first two pages for equations, domain, rates, and behavior 32 cards. Then, paste each card under the given graphs G1-G8 that correspond to the polar curve.

E1 $f(\theta) = r = 6\cos(4\theta)$	E2 $f(\theta) = r = 6\cos(3\theta)$	E3 $f(\theta) = r = 5\cos(\theta)$	E4 $f(\theta) = r = 6\sin(5\theta)$
E5 $f(\theta) = r = 1.25\theta$	E6 $f(\theta) = r = 4 - 3\sin(\theta)$	E7 $f(\theta) = r = 6 + 6\sin(\theta)$	E8 $f(\theta) = r = 3 + 6\cos(\theta)$
D1 Cardioid Domain $(0, 2\pi)$ Maximum: 12 at $\theta = \frac{\pi}{2}$ Minimum: 0 at $\theta = \frac{3\pi}{2}$	D2 Limaçon with inner loop Domain $(0, 2\pi)$ Maximum: 9 at $\theta = 0$ Minimum: -3 at $\theta = \pi$	D3 Rose curve, $n = 5$ Domain $(0, \pi)$ Extrema $\|6\|$ at $\theta = \frac{\pi}{10} + \frac{\pi}{5}n$	D4 Convex limaçon Domain $(0, 2\pi)$ Extrema 7 at $\theta = \frac{3\pi}{2}$
D5 Circle Domain $(0, \pi)$ Extrema 5 at $\theta = 0$	D6 Rose curve, $n = 3$ Domain $(0, \pi)$ Extrema $\|6\|$ at $\theta = 0 + \frac{\pi}{3}n$	D7 Spiral Domain $(0, \infty)$ Minimum: 0 at $\theta = 0$	D8 Rose curve, $n = 4$ Domain $(0, 2\pi)$ Extrema $\|6\|$ at $\theta = \frac{\pi}{8} + \frac{\pi}{4}n$
R1 AROC: $\left(0, \frac{\pi}{4}\right) = -\frac{6\sqrt{2}}{\pi}$	R2 AROC: $\left(\pi, \frac{4\pi}{3}\right) = \frac{5}{4}$	R3 AROC: $\left(\frac{\pi}{4}, \frac{\pi}{2}\right) = -\frac{10\sqrt{2}}{\pi}$	R4 AROC: $\left(\frac{\pi}{4}, \frac{\pi}{2}\right) = -\frac{12\sqrt{2}}{\pi}$
R5 AROC: $\left(\frac{3\pi}{8}, \frac{\pi}{2}\right) = \frac{48}{\pi}$	R6 AROC: $\left(0, \frac{\pi}{10}\right) = \frac{60}{\pi}$	R7 AROC: $\left(\frac{\pi}{4}, \frac{\pi}{2}\right) = \frac{12\sqrt{2}}{\pi}$	R8 AROC: $\left(0, \frac{\pi}{6}\right) = \frac{18}{\pi}$

© 2024 Flamingo Math, LLC

Students have 8 polar curves to match with 4 categories in a cut-and-paste version, if you need that option.

Step-by-Step Instructions

HOW TO SHARE YOUR LINKS WITH STUDENTS

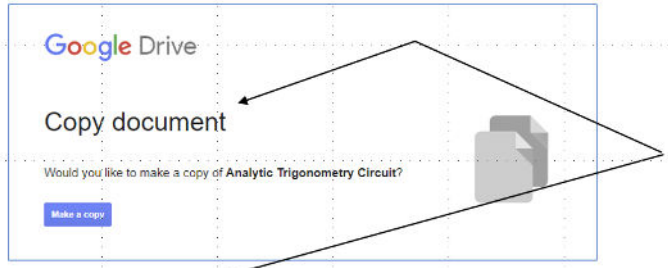
1. Through email
2. As a link through an app like Remind
3. As a link in a portfolio app like SeeSaw
4. As a link on Padlet
5. As a link in a LMS (Learning Manager Classroom or Schoology.

HOW TO COLLE FROM STU

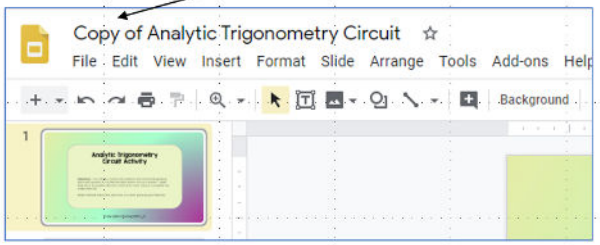
1. Students can share their work using th email it to you.
2. Students can Screenshot or take a pi
3. Students can post it on a Padlet or or
4. Students can attach it on the assignm

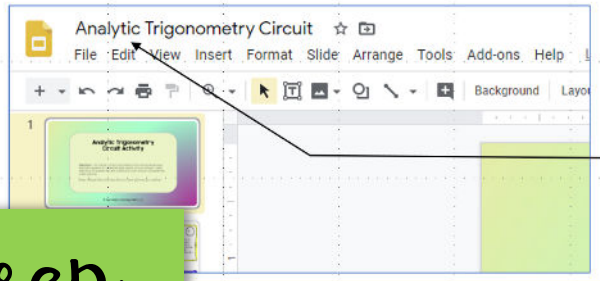
Easy-Grading

Copy - Rename - Assign



Your product link will force you to make a copy to your own Google Drive.





You can change the name of the document here.

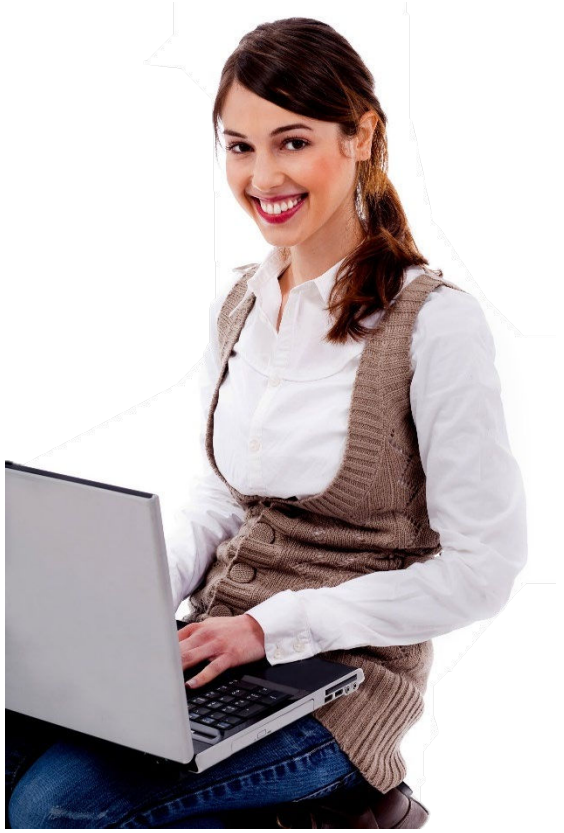
© Jean Adams: Flamingo Math, LLC

Easy-Prep

What are the benefits of a digital Google Forms resource?

BENEFITS OF A DIGITAL RESOURCE:

- Great for the 1:1 classroom
- Easy access through a laptop, tablet, PC, or mobile device
- Paperless
- Self-Grading with data analysis
- Editable
- Final product can be printed
- Instant feedback



You and your students must have a free Google account in order to access and interact with the activity.
It is not necessary to use Google Classroom to use this resource.

Flamingo MATH
Jean Adams