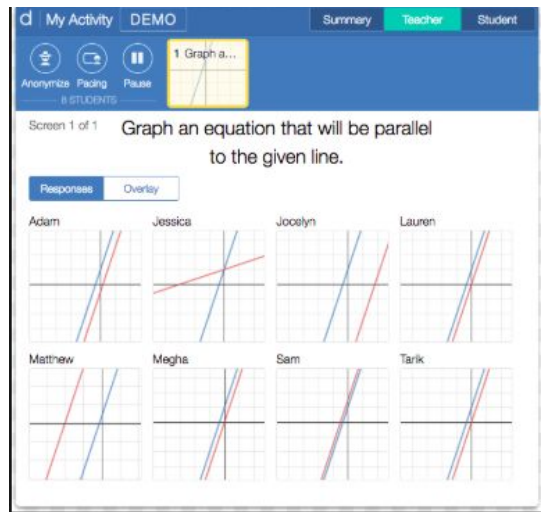


Desmos 201

Instructional Activities to Support Instruction



Objectives & Agenda

OBJECTIVES:

1. To increase teacher understanding and knowledge of Desmos App as a teacher and a student..
2. To use Desmos' Digital Activities to highlight how the App can be utilized within the classroom to support teacher instruction and student assessment
3. To use Desmos' Digital Activities to highlight how Desmos can be used to enhance student collaboration and increase student engagement.

AGENDA:

1. Introduction to Student View
2. Activity 1: Polygraph
3. Activity 2: Card Sort
4. Activity 3: Exploration
5. Teacher Accounts
6. Questions/Next Steps/Contacts

- In Desmos, you can sign-in as a teacher or a student.
- The teacher dashboard has additional features for classroom management and instructional support.



You will begin as a student.

student.desmos.com

Welcome!



Enter your class code:

Join

Sign in to come back to your work later:

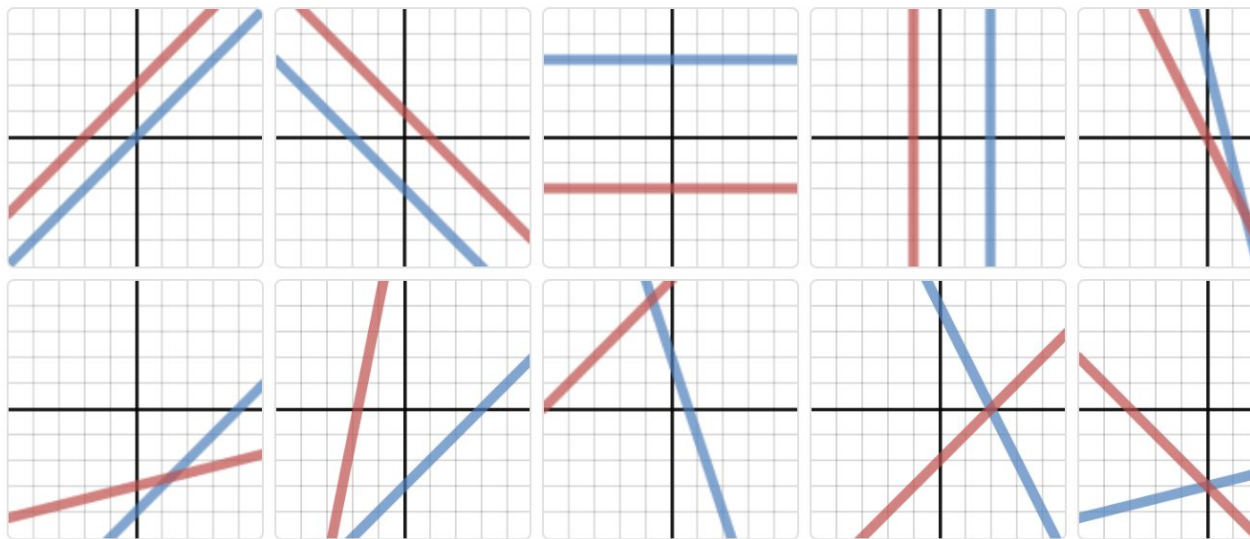


Sign in with Google

or

[Sign in with Desmos](#)

Activity 1: Polygraph



A1:A-REI.D.10

Activity 1: Polygraph

GOALS OF THIS ACTIVITY

Students will be able to...

- Identify important features of lines
- Precisely describe these features to their peers
- Increase their vocabulary relevant to lines

Your partner: Kaylee

YOU ASKED
Is the slope greater than 0?

KAYLEE CHOSE
No

YOU ELIMINATED

☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒

YOU ASKED
Does it cross the origin?

KAYLEE CHOSE
No

Select graphs to eliminate based on Kaylee's answer. Then press the button below.

Eliminate Selected

How the activity works:



Each student plays a practice round against the computer to learn how the game works.



Next, students are paired with a classmate to play polygraph with graphs (or polygons—it's teacher choice!) One person chooses a line; their partner asks yes/no questions in order to narrow a field of suspects down to one.



Between rounds, students answer questions that focus their attention on vocabulary and strategy.



Hey, students!

Go to student.desmos.com
and type in:

SHW CPH

You can also share this link with your students:

<https://student.desmos.com/?prepopulateCo>

Activity 1: Polygraph (Teacher View)

Player List:

Name	Score
Jessica	0 ✓ 1 ✗
Alyssa	1 ✓ 2 ✗
Cody	2 ✓ 1 ✗
Sofia	3 ✓ 0 ✗
Ethan	0 ✓ 2 ✗
Jayden	1 ✓ 2 ✗
Daniel	waiting for a partner
Selena	2 ✓ 3 ✗
Cameron	3 ✓ 2 ✗
Kaylee	0 ✓ 0 ✗
Ariana	1 ✓ 0 ✗
Max	1 ✓ 2 ✗
Fernando	3 ✓ 0 ✗
Jasmine	2 ✓ 0 ✗
Bionca	3 ✓ 2 ✗
Alex	0 ✓ 1 ✗

WAITING FOR A PARTNER: Daniel

QUESTIONS:

- Click to highlight the questions that distinguish between the two graphs.
- What question could you ask to distinguish between them?
- Choose two lines from this set that would be difficult to distinguish with one question.
- Eric says that he can tell all lines apart by asking these three questions:

ALL GAMES:

Game	Player	Questions
game in progress	Blanca	Does it go through the origin? Is the y intercept positive?
✓	Ethan	Is the slope positive? Does it cross the origin? Is the slope negative? Is the y intercept in the image?
✓	Alyssa	Is the slope negative? Does it have a positive y-intercept? Is it vertical or horizontal? Is the slope really steep?

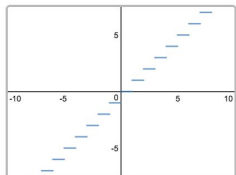
To what extent are students using formal vocabulary? What ways do they create to describe standard (and non-standard) features of the lines?

Keep an eye out for students who pick the wrong suspect. Thinking about what went wrong, is a challenging bit of reflection. Some students may need encouragement and support to see it through.

You can click on a pair's game in the teacher dash to view the entire game.

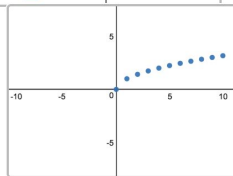
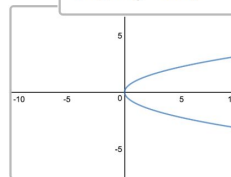
Activity 2: Card Sort

Sort these cards into two groups—one group of functions, and one group of not-functions.



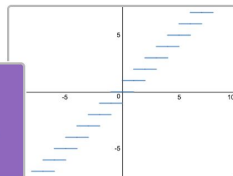
$$y = |x|$$

In a class of ninth graders, the relationship between shoe size (x -axis) and height (y -axis).



Function

In graders, the relationship between student (independent variable) and height (dependent variable).



Not a Function

$$y = \pm\sqrt{x}$$

Activity 2: Card Sort



GOALS OF THIS ACTIVITY

Students will be able to:

- Differentiate between linear and non-linear relationships represented in different forms
- Construct linear and non-linear model

1 Put these nine cards i... 



2 How Did You Decide? 

$$y = -2x - 3$$

How did you decide which cards to group with this card?



3 Title This Group 



Kimberly grouped these two cards together. What





Hey, students!

Go to student.desmos.com
and type in:

PFV N5N

You can also share this link with your students:

<https://student.desmos.com/?prepopulateCo>



Hey, students!

Go to student.desmos.com
and type in:

VEQ Z8C

You can also share this link with your students:

<https://student.desmos.com/?prepopulateCo>

Activity 2: Card Sort (Teacher View)

Student List:

Name	Score
Jessica	0 ✓ 1 ✗
Alyssa	1 ✓ 2 ✗
Cody	2 ✓ 1 ✗
Sofia	3 ✓ 0 ✗
Ethan	0 ✓ 2 ✗
Jayden	1 ✓ 2 ✗
Daniel	waiting for a partner
Selena	2 ✓ 3 ✗
Cameron	3 ✓ 2 ✗
Kaylee	0 ✓ 0 ✗
Ariana	1 ✓ 0 ✗
Max	1 ✓ 2 ✗
Fernando	3 ✓ 0 ✗
Jasmine	2 ✓ 0 ✗
Bionca	3 ✓ 2 ✗
Alex	0 ✓ 1 ✗

WAITING FOR A PARTNER: Daniel

QUESTIONS:

- Click to highlight the questions that distinguish between the two graphs.
- What question could you ask to distinguish between them?
- Choose two lines from this set that would be difficult to distinguish with one question.
- Eric says that he can tell all lines apart by asking these three questions:

ALL GAMES:

Game In Progress	Questions
POKER: Bionca GUSSER: Ethan	Does it go through the origin? Is the y intercept positive?
POKER: Ethan GUSSER: Serena	Is the slope positive? Does it cross the origin? Is the slope negative? Is the y intercept in the image?
POKER: Alyssa GUSSER: Michelle	Is the slope negative? Does it have a positive y-intercept? Is it vertical or horizontal? Is the slope really steep?

Annotations:

- Blue arrow pointing to the 'WAITING FOR A PARTNER' section.
- Blue arrow pointing to the 'QUESTIONS' section.
- Blue arrow pointing to the 'ALL GAMES' section.
- Blue arrow pointing to the 'POKER' column in the 'ALL GAMES' section.
- Blue arrow pointing to the 'GUSSER' column in the 'ALL GAMES' section.

To what extent are students using formal vocabulary? What ways do they create to describe standard (and non-standard) features of the lines?

Keep an eye out for students who pick the wrong suspect. Thinking about what went wrong, is a challenging bit of reflection. Some students may need encouragement and support to see it through.

You can click on a pair's game in the teacher dash to view the entire game.

Activity 3: Writing Rules



Selected from the
Desmos Community

GOALS OF THIS ACTIVITY

Students will be able to:

- Identify linear, exponential, and quadratic equations
- Construct linear, exponential, and quadratic models
- **Justify their reasoning for linear, exponential, and quadratic models.**



Activity is designed for
Collaborative Discussion



Hey, students!

Go to student.desmos.com
and type in:

QBR FP2

You can also share this link with your students:

<https://student.desmos.com/?prepopulateCode=QBRFP2>

[Home](#)[Most Popular](#)[Latest](#)

BUNDLES

[Conics](#)[Exponential](#)[Expressions](#)[Functions](#)[Inequalities](#)[Linear](#)[Linear Systems](#)[Modeling](#)[Quadratic](#)[Transformations](#)

Desmos Classroom Activities

At Desmos, our mission is to help every student learn math and love learning math. With that in mind, we've assembled a collection of unique and engaging digital activities, which are free for you and your students.

[Watch the video](#)

What We Offer



Meaningful Feedback




We show students what their answers mean, then give them the opportunity to improve their thinking and revise their work.





@LisaGCeja


So proud of the creative thinking today from my #algebra 1 students using @Desmos #marbleslides. #edtech #desmos


Take a moment to create your account.


 Anonymize
  Pacing
  Pause
 0 STUDENTS


1 Table #1 


2 Table #2 


3 Table #3 


4 Reflect 


5 Write an. 


6 Write an. 

7 Write an. 

8 Similariti. 

9 Reflect # 

10 Reflect 

11 

Screen 1 of 14

Table #1

Responses Original

x	y
-2	3
-1	0
0	-1
1	0

What type of function will fit these data points?

☐ Answer Key

Linear

0 students

Quadratic

0 students

Exponential

0 students

None of the above

0 students

Teacher Moves

Sample Responses

Questions???

My Activity DEMO Summary Teacher Student

Anonymize Pacing Pause 1 Graph a...

8 STUDENTS

Screen 1 of 1 Graph an equation that will be parallel to the given line.

Response Overlay

Adam Jessica Jocelyn Lauren

Matthew Megha Sam Tarik



Awesome Activities for Middle School

Grade 6

Featured

Grade 7

Algebra

Grade 8

Geometry

Hand-crafted classroom activities. Designed by teachers. Powered by Desmos. teacher.desmos.com

Awesome Activities for High School

Algebra 1

Featured

Geometry

Precalculus

Algebra 2

Calculus

Hand-crafted classroom activities. Designed by teachers. Powered by Desmos. teacher.desmos.com

Next Steps & Contacts

NEXT STEPS:

- Play around in Desmos! Find a teacher friend and go through these interactive activities again and focus on incorporating them in a way that supports your instructional approach.
- View the interactive tutorials and videos provided by Desmos to learn even more of what Desmos has to offer.
- Download presentation materials for the Desmos 101 Session (Algebra I Beginner) to learn about or refresh your knowledge on basic Desmos' tools

CONTACTS:

- Kate Jensen
HS Math Teacher/LDOE Teacher Leader
Kenner Discovery Health Sciences Academy
Kate.Jensen@discoveryhsf.org
- Danielle Ricks
Math Assessment Coordinator, LDOE
Danielle.ricks@la.gov
- Assessment Mailbox
assessment@la.gov