Desmos + Algebra = Deep Understanding x Fun

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Desmos?

www.desmos.com

Why Desmos?

- can immediately show an error and makes students think about why it didn't work
- allows for multiple ways to write the equation (not just y=)
- allows students to be creative
- quickly allows students to see the results of changing different aspects of an equation
- allows students to explore higher level equations before they were even taught how to use them
- Desmos is constantly improving

Linear Equations Unit

What we were assessing

- slope
- intercepts
- vertical and horizontal lines
- parallel & perpendicular lines
- forms of equations (slope-intercept, point-slope)
- domain and range

Using Desmos for Assessment

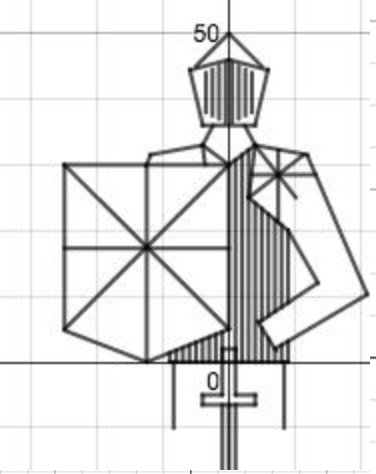
This was 30% of the unit test grade.

The other 70% was assessed with a standard paper and pencil test.

Creative Art Project - Day 1

Students work through the different levels

Goal is to progress to the point where they are comfortable making a picture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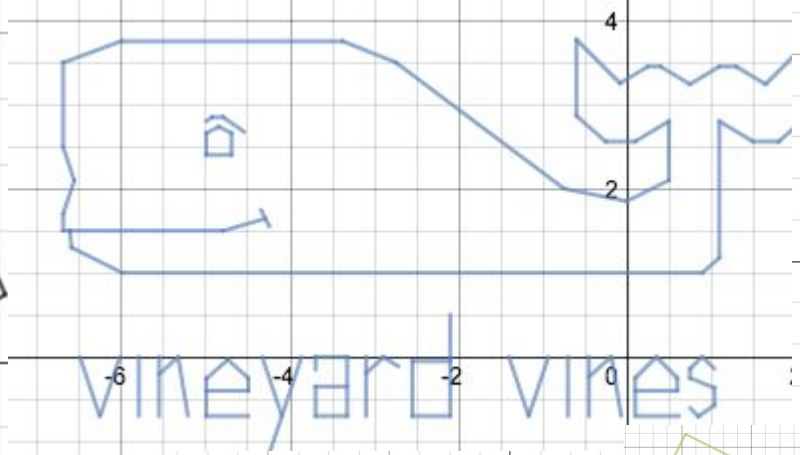
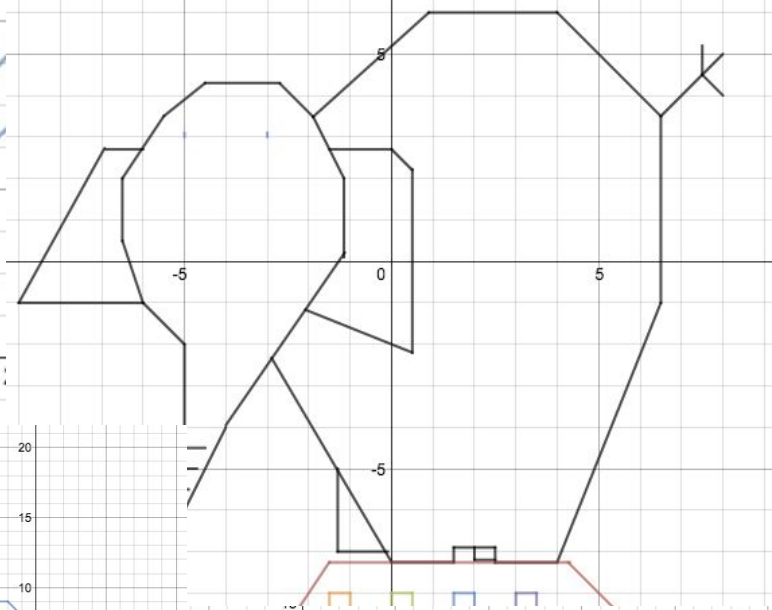

4
2
-6
-4
-2
0
vineyard vines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-5
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5
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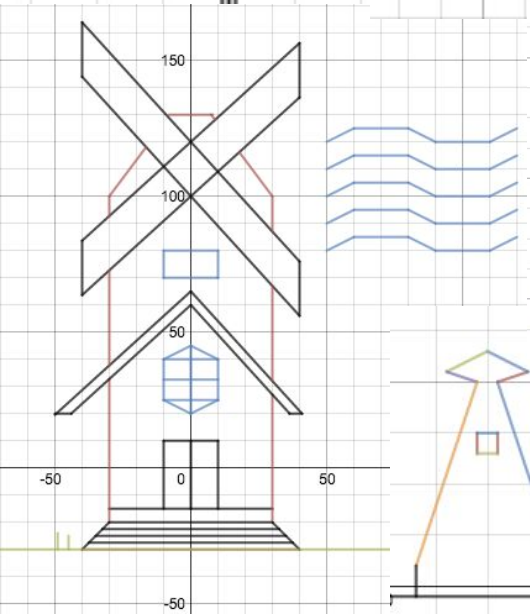
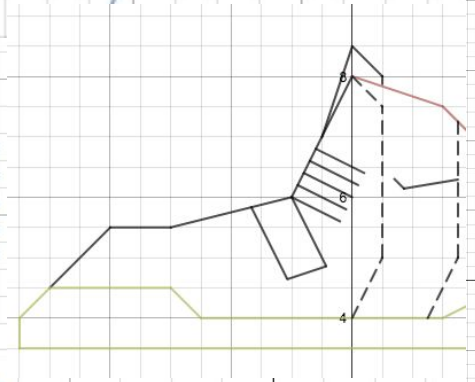
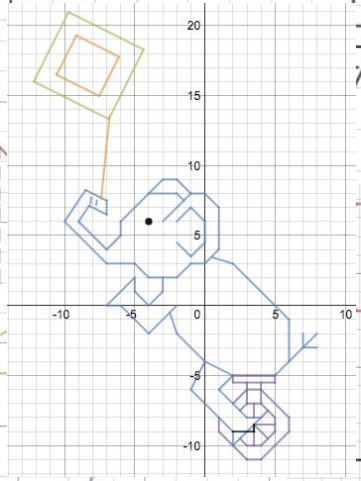
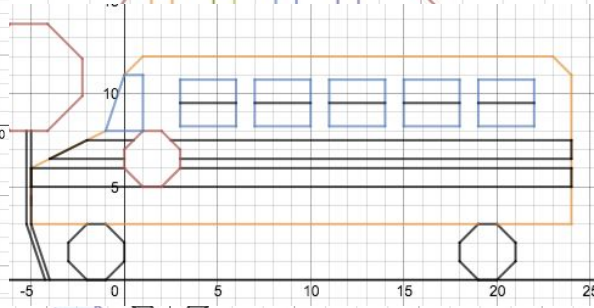
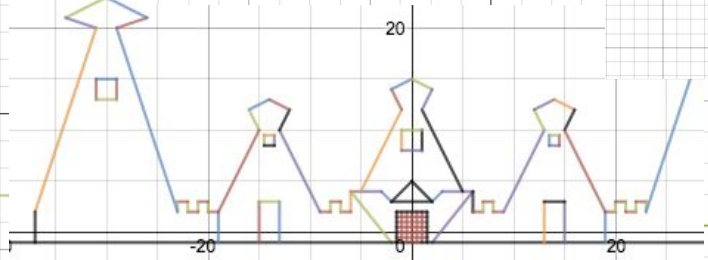
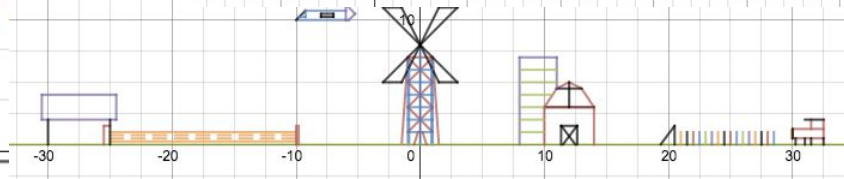

150
100
50
-50
0
50
-50


8
6
4


20
15
10
5
-5
-10
-10
-5
0
5
10


10
5
-5
0
5
10
15
20


20
-20
0
20


10
-30
-20
-10
0
10
20
30

Creative Art Project

Due at 11:59PM on Tuesday 10/15

Your ucfsd.net username will be recorded when you submit this form.

Class Period

- ○ Period 4
- ○ Period 5

Last Name

First Name

Link

You can only send this once - Please be sure that you use the most upd

☐ Send me a copy of my responses.

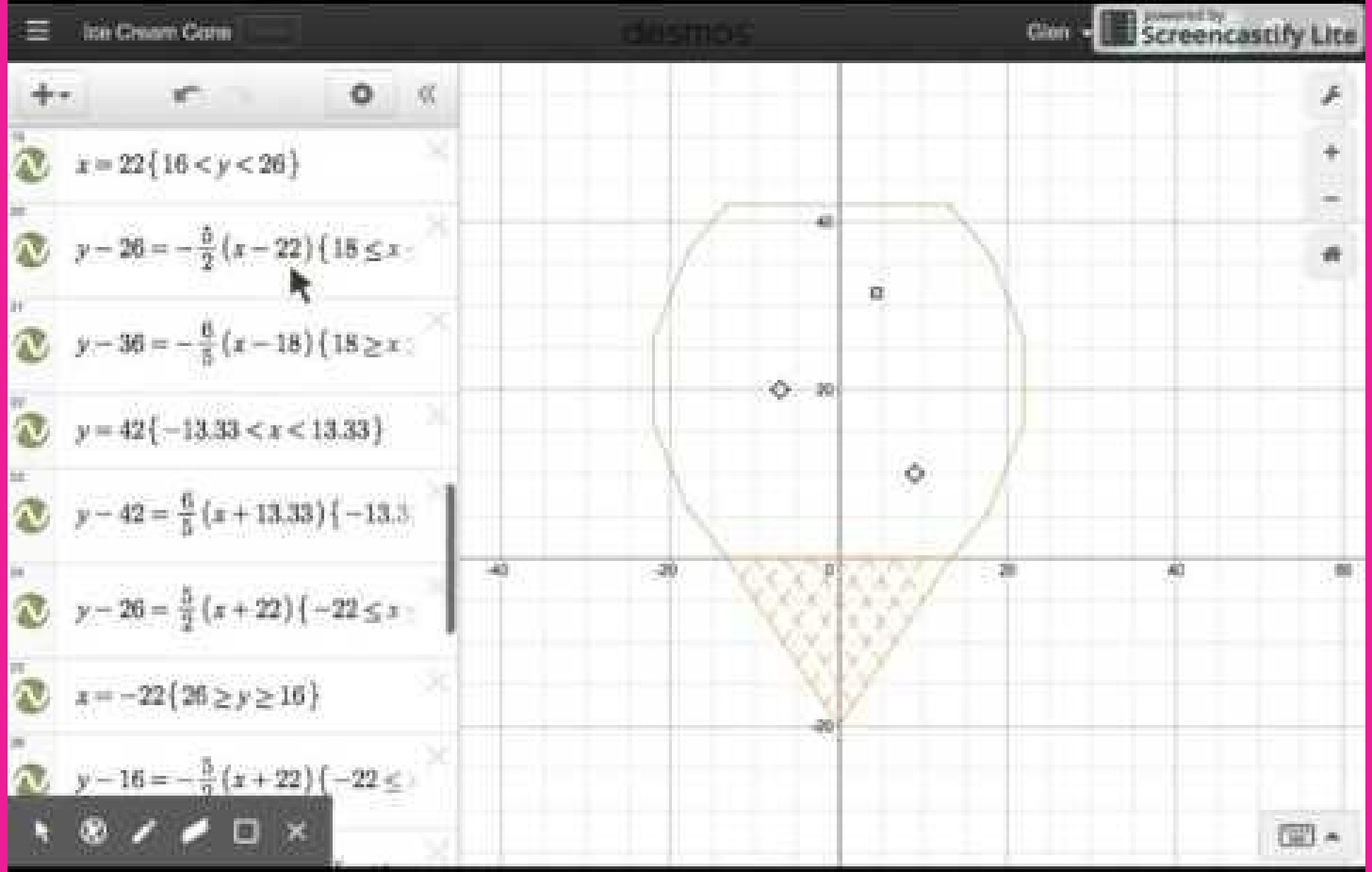
Review and Submit

Never submit passwords through Google Forms.

Timestamp	Link	Class Period		
10/14/2013 20:06:3	https://www.desmos	Period 4	28	2 pt slope
10/14/2013 19:02:3	https://www.desmos	Period 5	30	
10/16/2013 7:31:50	https://www.desmos	Period 5	30	
10/15/2013 14:05:1	https://www.desmos	Period 5	28	2 pt slope
10/14/2013 19:47:1	https://www.desmos	Period 5	24	0 slope int
10/15/2013 18:58:1	https://www.desmos	Period 5	30	
10/14/2013 22:26:0	https://www.desmos	Period 4	30	
10/15/2013 19:48:4	https://www.desmos	Period 4	30	
10/15/2013 18:48:0	https://www.desmos	Period 5	30	
10/15/2013 21:10:3	https://www.desmos	Period 5	30	
10/10/2013 16:27:4	https://www.desmos	Period 4	28	Pt slope form - not really
10/14/2013 21:01:4	https://www.desmos	Period 4	28	slope intercept - 0 slope
10/14/2013 22:52:3	https://www.desmos	Period 4	24	0 pt slope
10/14/2013 21:20:2	https://www.desmos	Period 4	30	
10/15/2013 18:23:4	https://www.desmos	Period 4	30	
10/14/2013 16:32:2	https://www.desmos	Period 5	30	

Requirements:

3 sets of parallel lines	5 points
3 sets of perpendicular lines	5 points
3 lines in slope-intercept form	5 points
3 lines in point-slope form	5 points
3 restricted domains	2 points
3 restricted ranges	2 points
3 vertical lines	2 points
3 horizontal lines	2 points
Creativity	2 points


Ice Cream Cone
desmos
Glen
Screencastify Lite
$x = 22\{16 < y < 26\}$
$y - 26 = -\frac{6}{2}(x - 22)\{15 \leq x$
$y - 36 = -\frac{6}{5}(x - 18)\{18 \geq x$
$y = 42\{-13.33 < x < 13.33\}$
$y - 42 = \frac{6}{5}(x + 13.33)\{-13.3$
$y - 26 = \frac{5}{2}(x + 22)\{-22 \leq x$
$x = -22\{26 \geq y \geq 16\}$
$y - 16 = -\frac{5}{9}(x + 22)\{-22 \leq$
40
30
-40
-20
0
20
40
60
-20

Changes

- You may not use sliders
- Parallel and perpendicular lines cannot have a slope of 1, -1, 0 or no slope.
- Point-slope and slope intercept form cannot have a slope of 0 or go through the origin.
- Point-slope form equations cannot contain an x or y intercept.
- The project must BE something: No Abstract Art!

Linear Inequalities Unit

What we were assessing:

- compound inequalities
- slope and intercept
- vertical and horizontal lines
- domain and range

Assessment

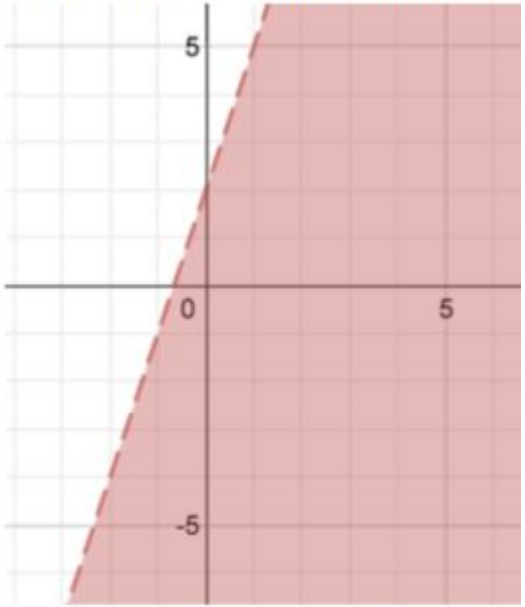
Students must recreate a given picture

This was 20% of the unit test grade.

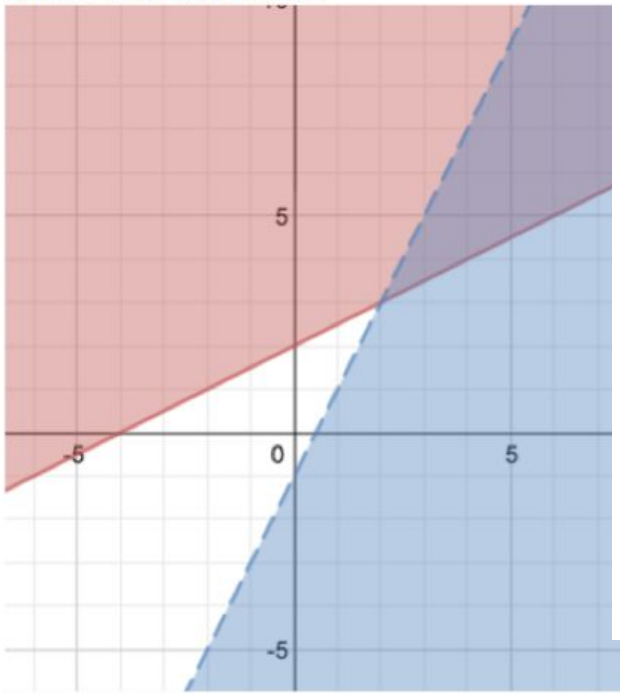
The other 80% was assessed with a standard paper and pencil test.

Practice Day
– Achieve a “level”

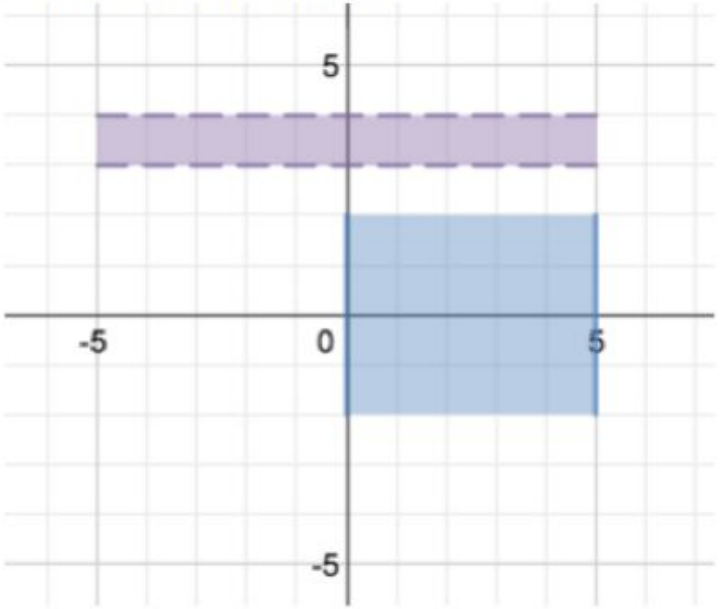
LEVEL 1: In one inequality



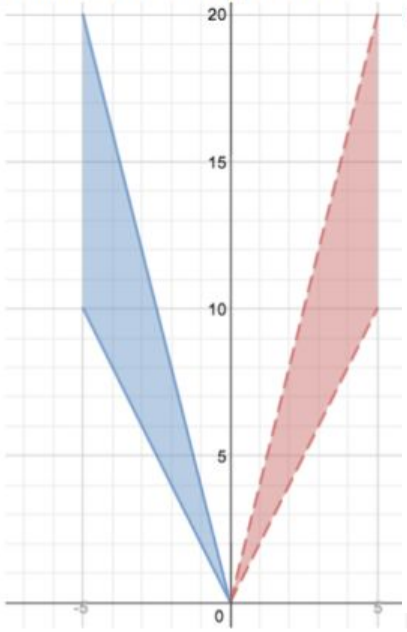
LEVEL 2: In 2 inequalities



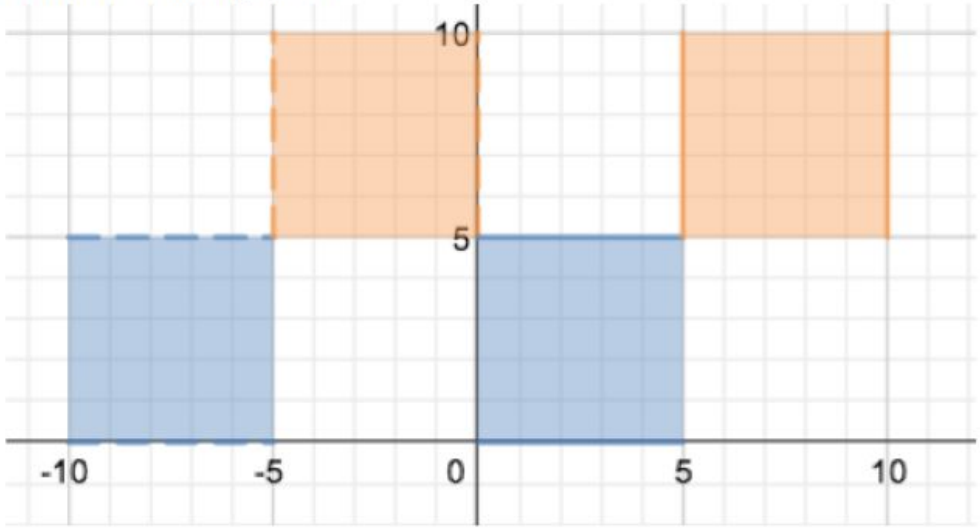
LEVEL 3: In 2 inequalities



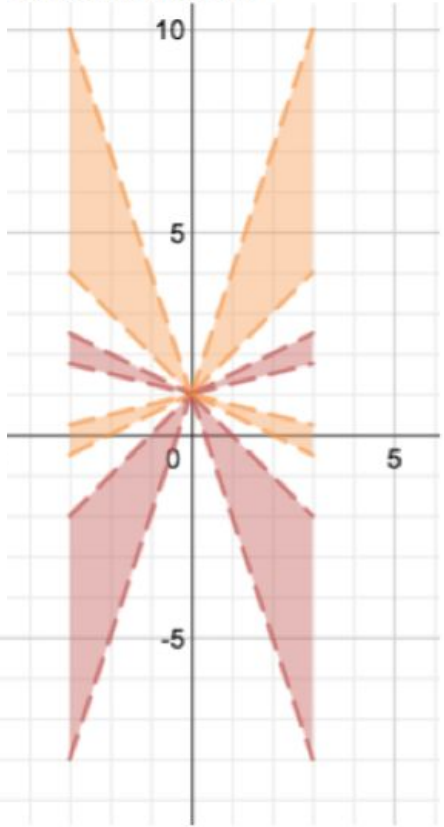
LEVEL 4: In 2 inequalities

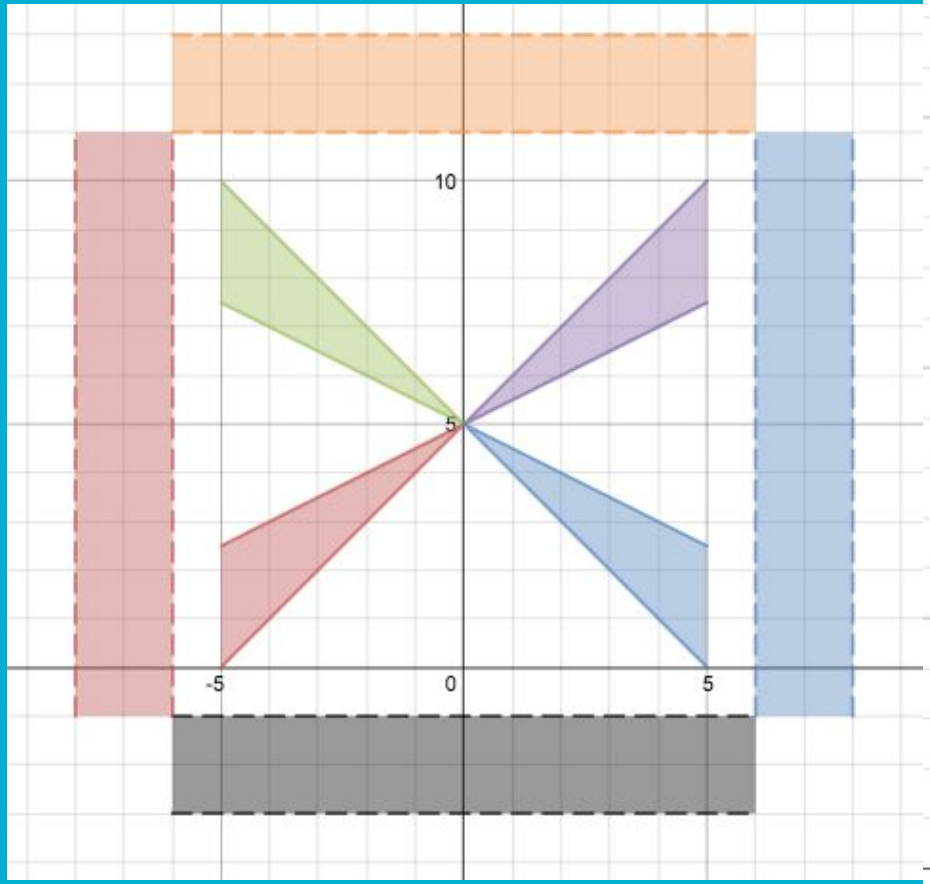


LEVEL 5: In 4 inequalities



LEVEL 6: In 8 inequalities




10
5
-5
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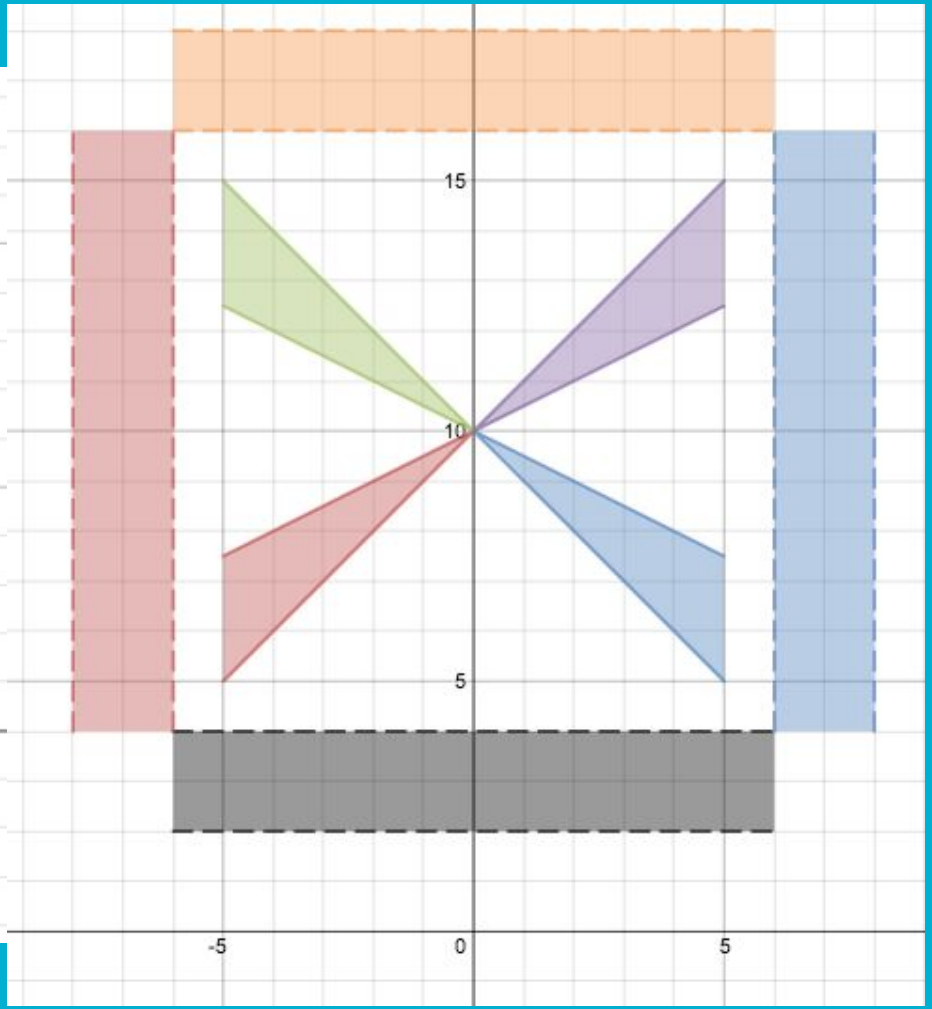
15
10
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-5
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5

Algebra 1 Desmos Inequality TEST submission

Your username (**sremphrey@ucfsd.net**) will be recorded when you submit this form. Not **sremphrey**? Sign out

Name (Last, First)

Class period

- Period 1
- Period 2
- Period 3

Version

- A
- B
- C
- D

Link to final Desmos graph
Make sure to do a save again on your final one!

Send me a copy of my responses.

Submit

	Period 1	B	https://www.desmo
ıe	Period 2	A	https://www.desmo
risty	Period 3	D	https://www.desmo
	Period 3	A	https://www.desmo
JP	Period 2	B	https://www.desmo
Ryan	Period 1	D	https://www.desmo
	Period 2	A	https://www.desmo
arus	Period 3	B (16)	https://www.desmo
ara	Period 2	A	https://www.desmo
a	Period 2	D	https://www.desmo
ı	Period 1	B	https://www.desmo
	Period 3	C	https://www.desmo
thew	Period 3	A	https://www.desmo
	Period 2	D (20)	https://www.desmo
rgaret	Period 1	C	https://www.desmo

Why we feel that using Desmos promotes a deeper understanding and more fun

Evaluation

http://bit.ly/1R13yuE

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