

PRE-CALC. W/TRIG

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General Tools

Algebra Tiles (CPM)

This tutorial describes how to use the Algebra Tiles including additional features.

Click on the link below to access eTool.

[Algebra Tiles \(CPM\)](#)

1. The top bar has three main parts: Pen & Paper Icon, '?' Icon, and the Arrow Icon.

1. Select the Pen & Paper Icon to:

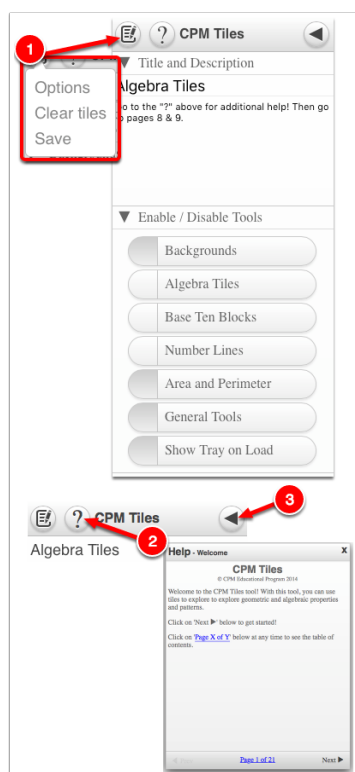
Options - Add Title and Description and Enable/Disable Tools.

Clear Tiles - This will remove all the tiles that are in the tile area.

Save - This will save all the changes made.

2. Select the '?' icon for directions.

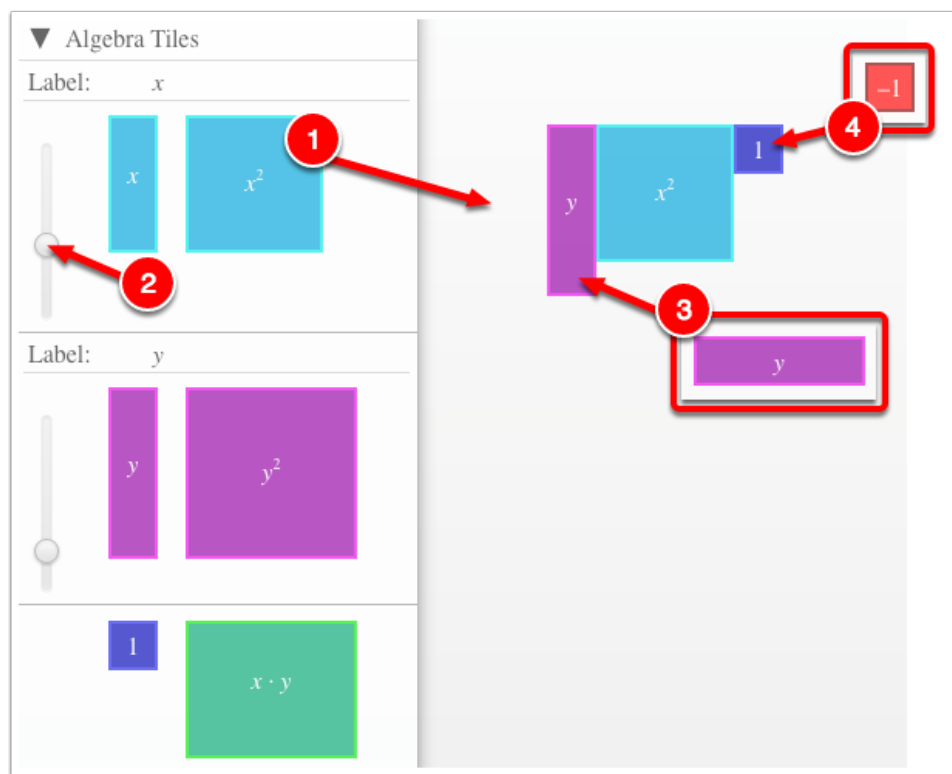
3. Select the Arrow Icon at the right to open and close the tray.



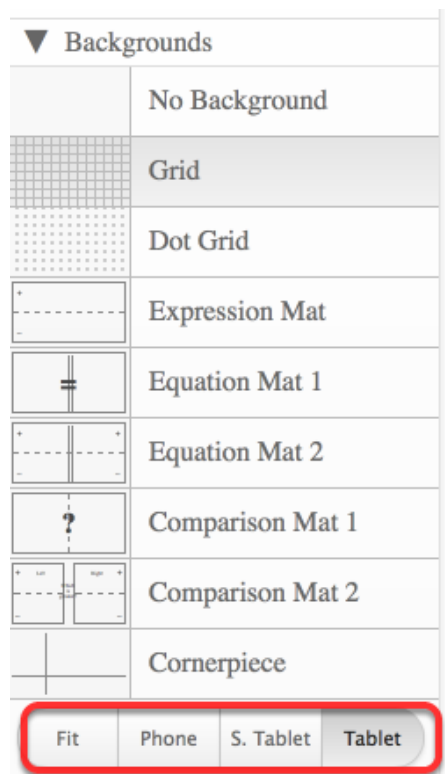
2. Drag tiles from the tray at the left to the display area at the right.

1. Select one of the tiles and drag it to the tile area.

2. Use the sliders in the tray to change the size of the tiles.
3. Double click tiles to change orientation (horizontal/vertical).
4. Click on a tile once to change the sign (+ -).
Note: The color of the tile will turn to red for negative sign.

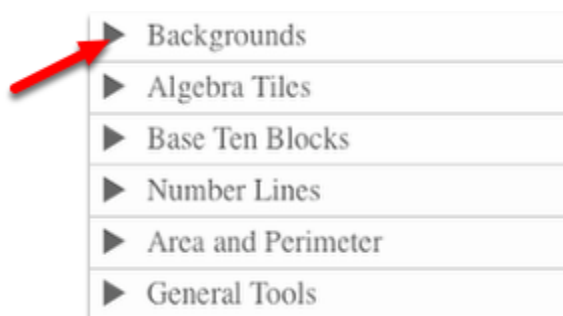


3. Choose from a variety of different mats. Also choose from a variety of sizes to fit on various devices.



4. Choose from a variety of different tiles:

- Click the arrow next to the tool to view/hide the options for each tool.



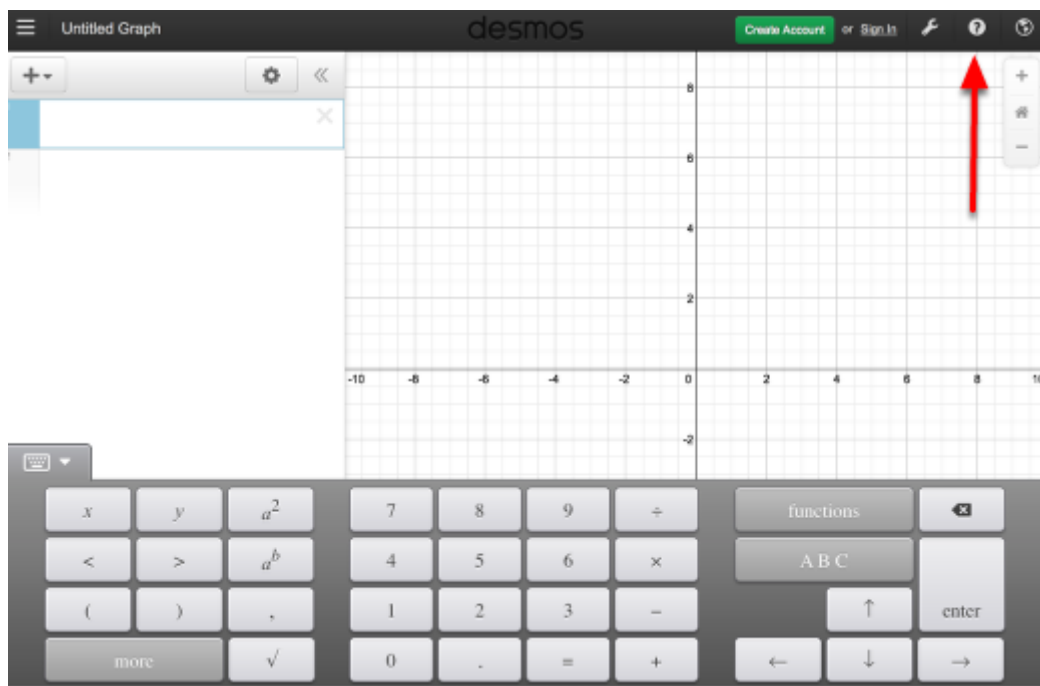
Desmos Graphing Calculator

This free graphing calculator allows students to create a free account to save all of their graphs, animations, and projects created.

Click on the "Desmos Graphing Calculator" link below.

[Desmos Graphing Calculator](#)

1. Click on all of the buttons. Try it out! For extra help, click the "?".



2. Click on the interactive tours below for help to create:

[Sliders](#)

[Tables](#)

[Advanced Tables](#)

[Restrictions](#)

3. The interactive tours will NOT let you make a mistake! Try the links above!

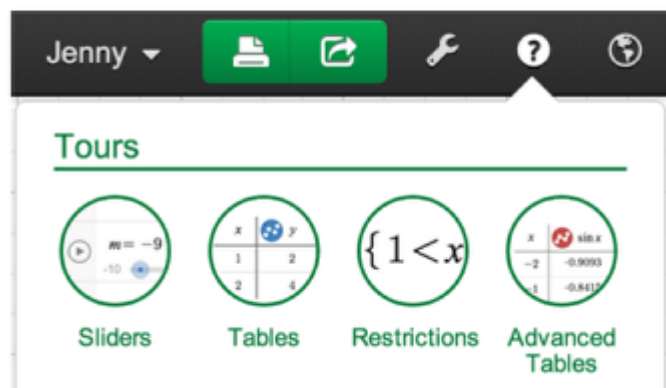
Interactive Tours



Team Desmos

posted this on December 29, 2013 22:13

Try one (or all!) of the interactive tours to learn more about sliders, tables, restrictions, and more:



4. Need additional help? Watch these very short excellent videos!

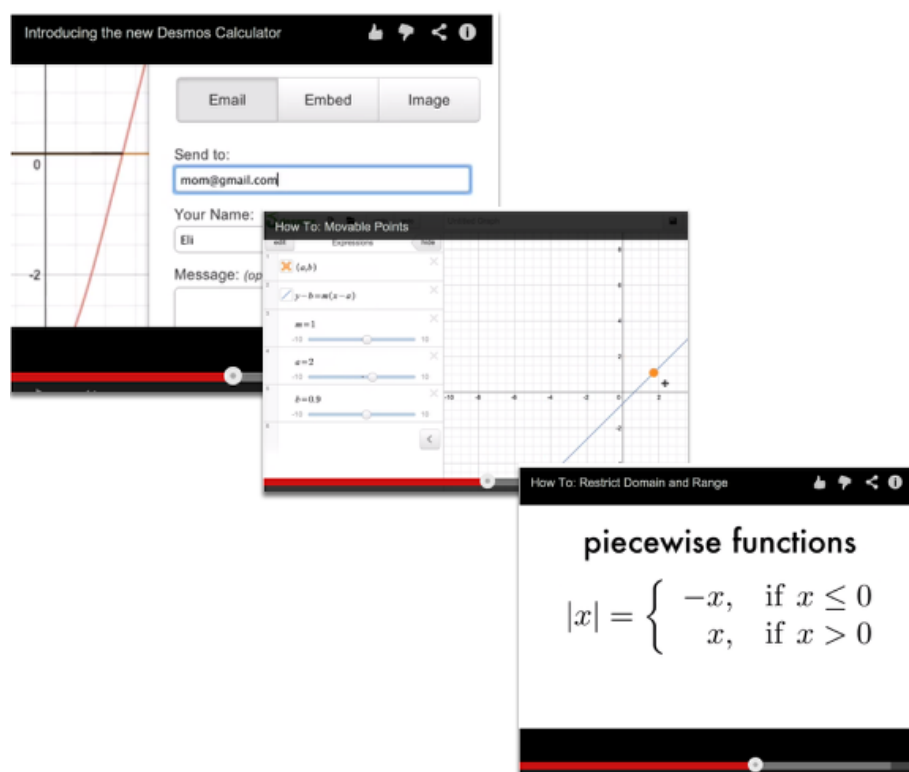
[Desmos Introduction](#)

[Moveable Points](#)

[Graph Inequalities](#)

[Piece-Wise Function](#)

5. The video links will help you with many of your graphing projects!



6. If you still need help, check out Desmos "Knowledge Base"

[Desmos Knowledge Base](#)



Chapter 1

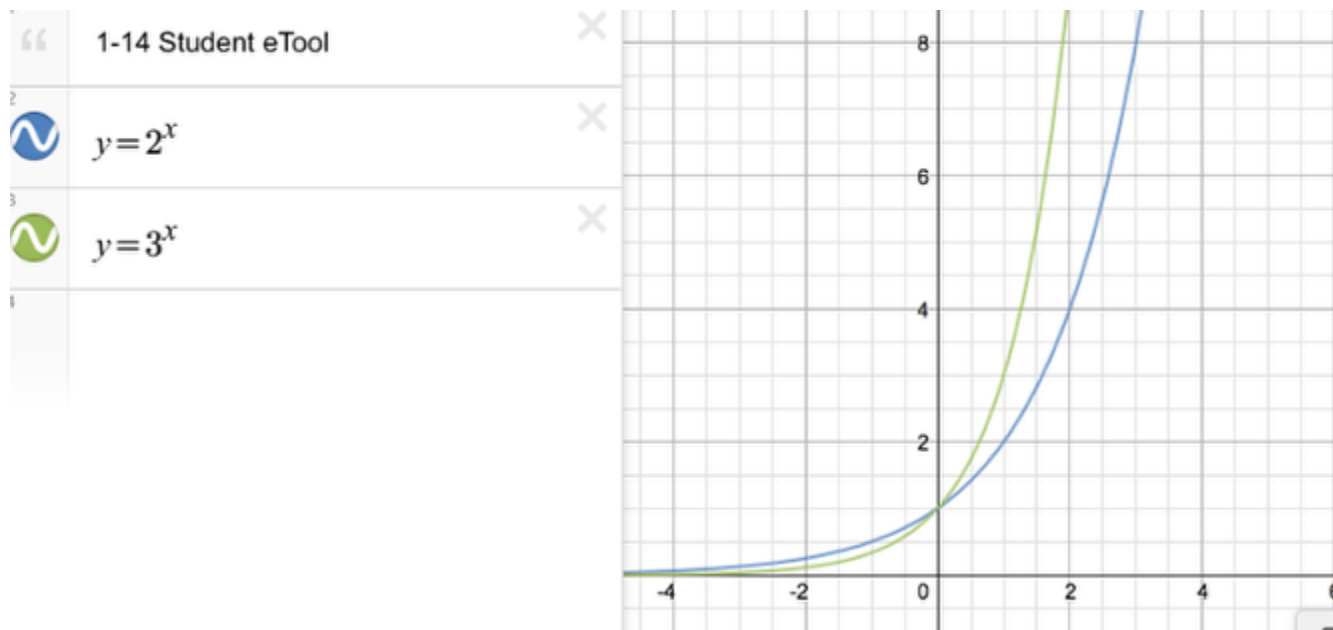
PCT 1.1.2: 1-14 & 1-20 Student eTool

Click on the link below for the "1-14 Student eTool"

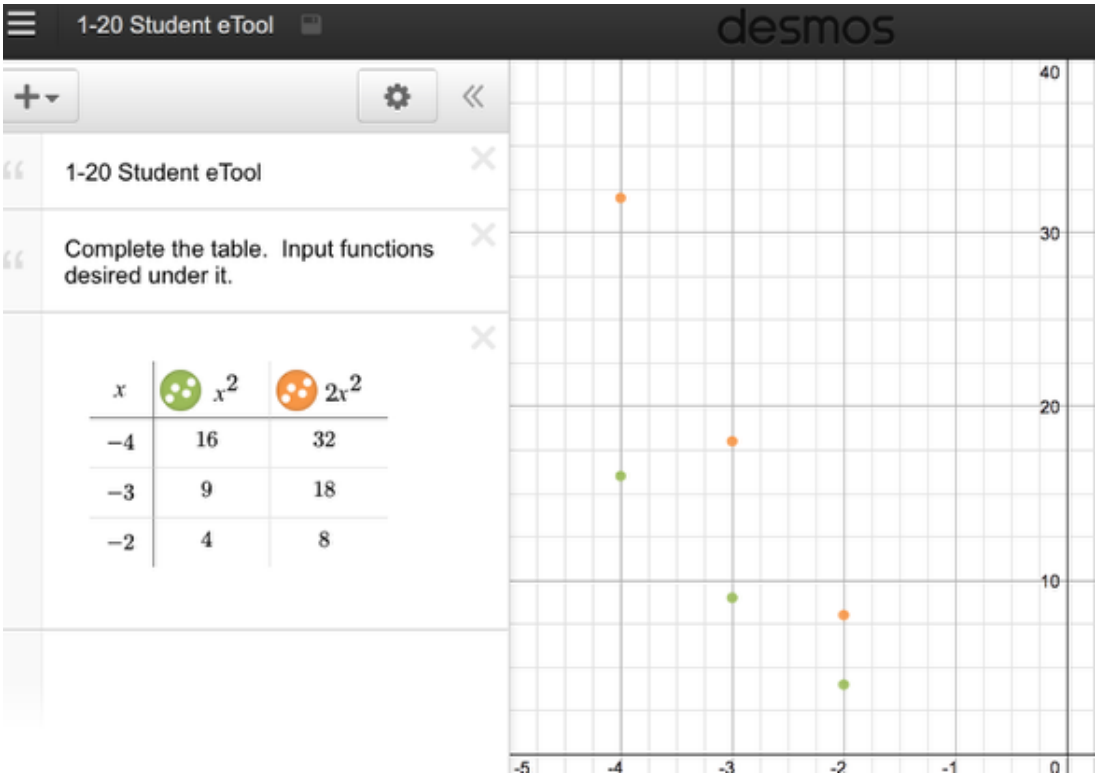
[PCT 1-14 Student eTool \(Desmos\)](#)

[PCT 1-20 Student eTool \(Desmos\)](#)

1. PCT 1-14 Student eTool:



2. PCT 1-20 Student eTool:



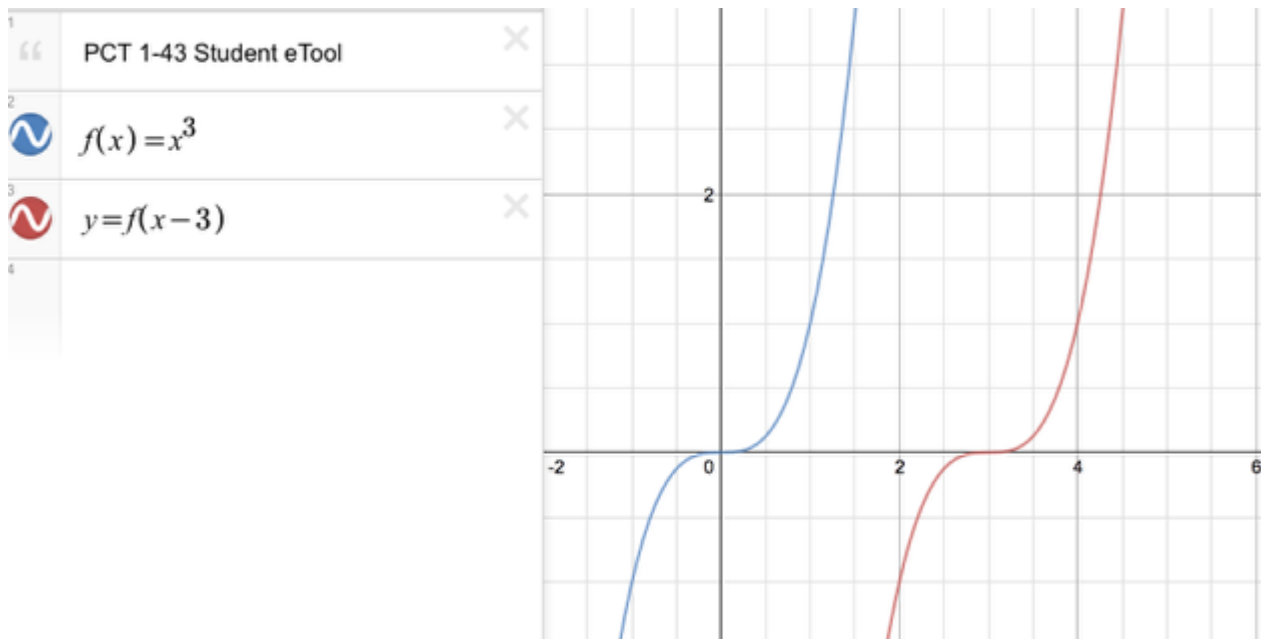
PCT 1.1.4: 1-43 & 1-44 Student eTool

Click on the link below for the "1-43 Student eTool"

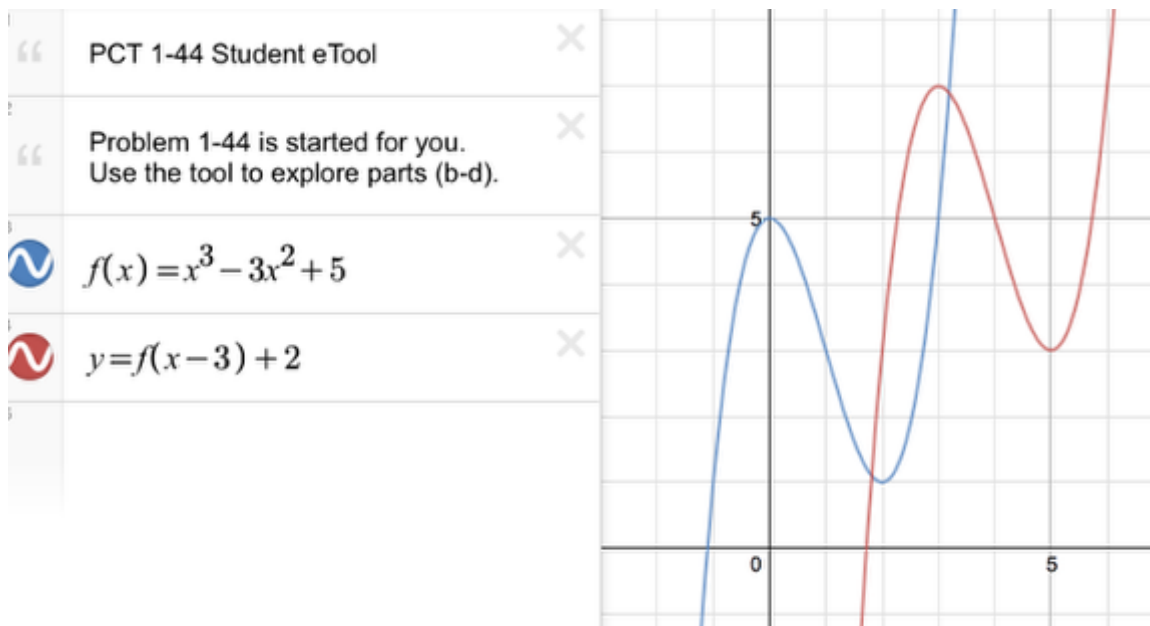
[PCT 1-43 Student eTool \(Desmos\)](#)

[PCT 1-44 Student eTool \(Desmos\)](#)

1. PCT 1-43 Student eTool:



2. PCT 1-44 Student eTool:

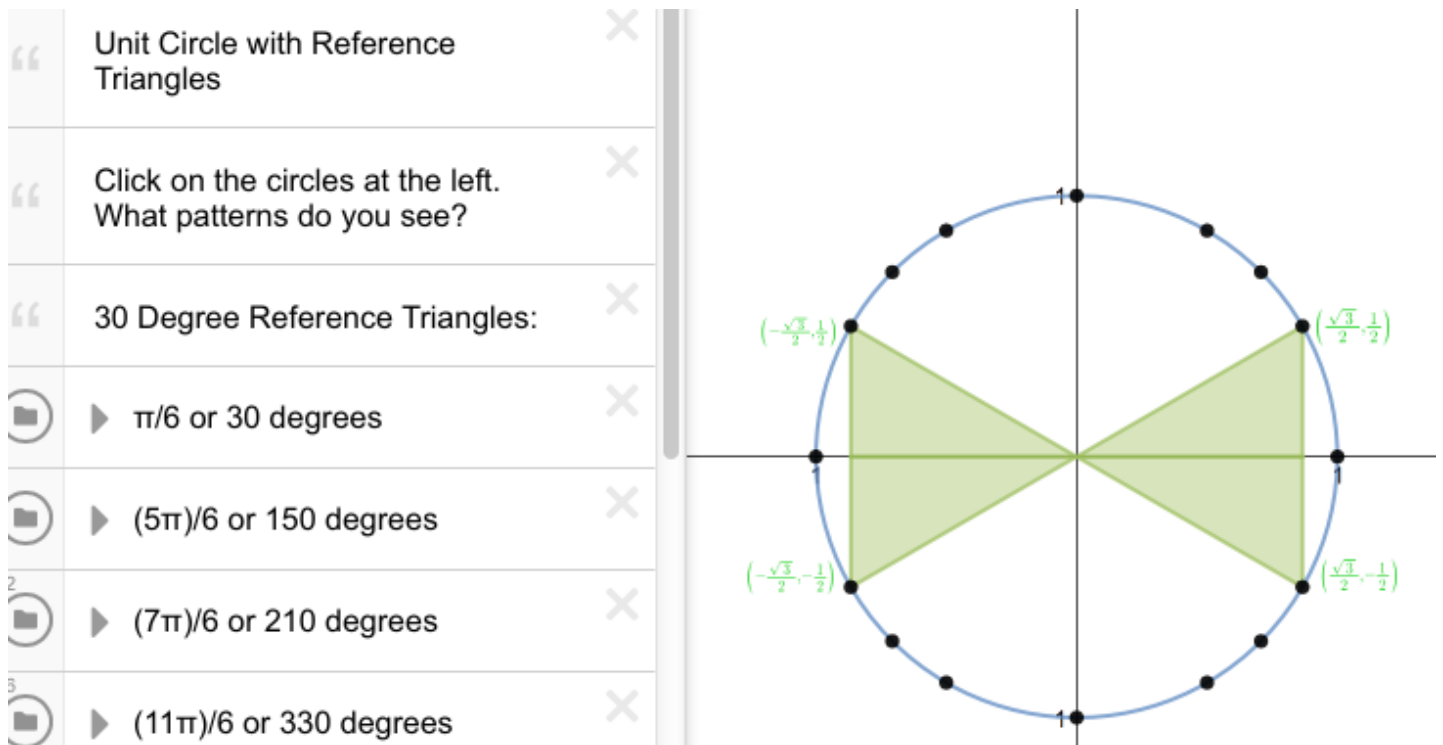


PCT 1.4.2: Unit Circle with Reference Triangles

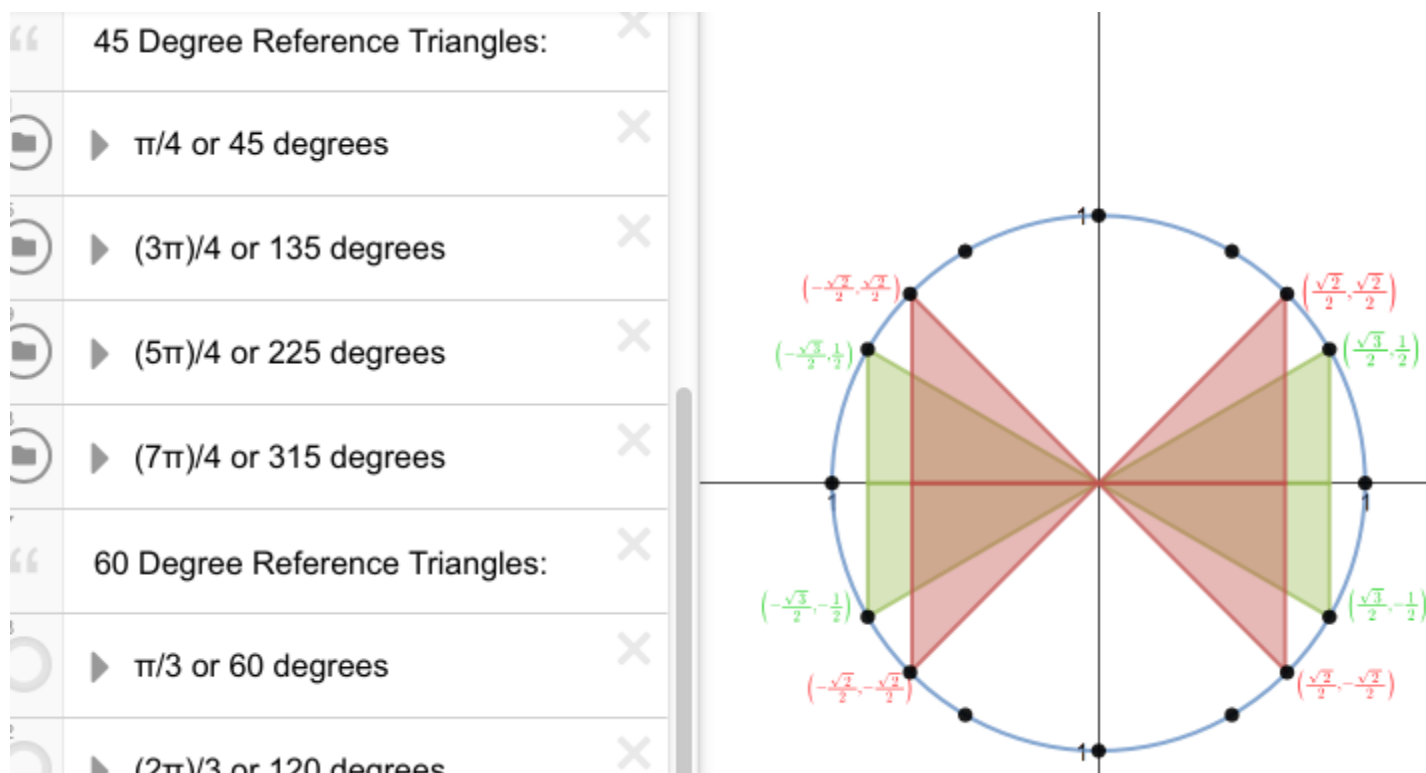
Click on the link below for the "Unit Circle with Reference Triangles"

[Unit Circle Demonstration eTool \(Desmos\)](#)

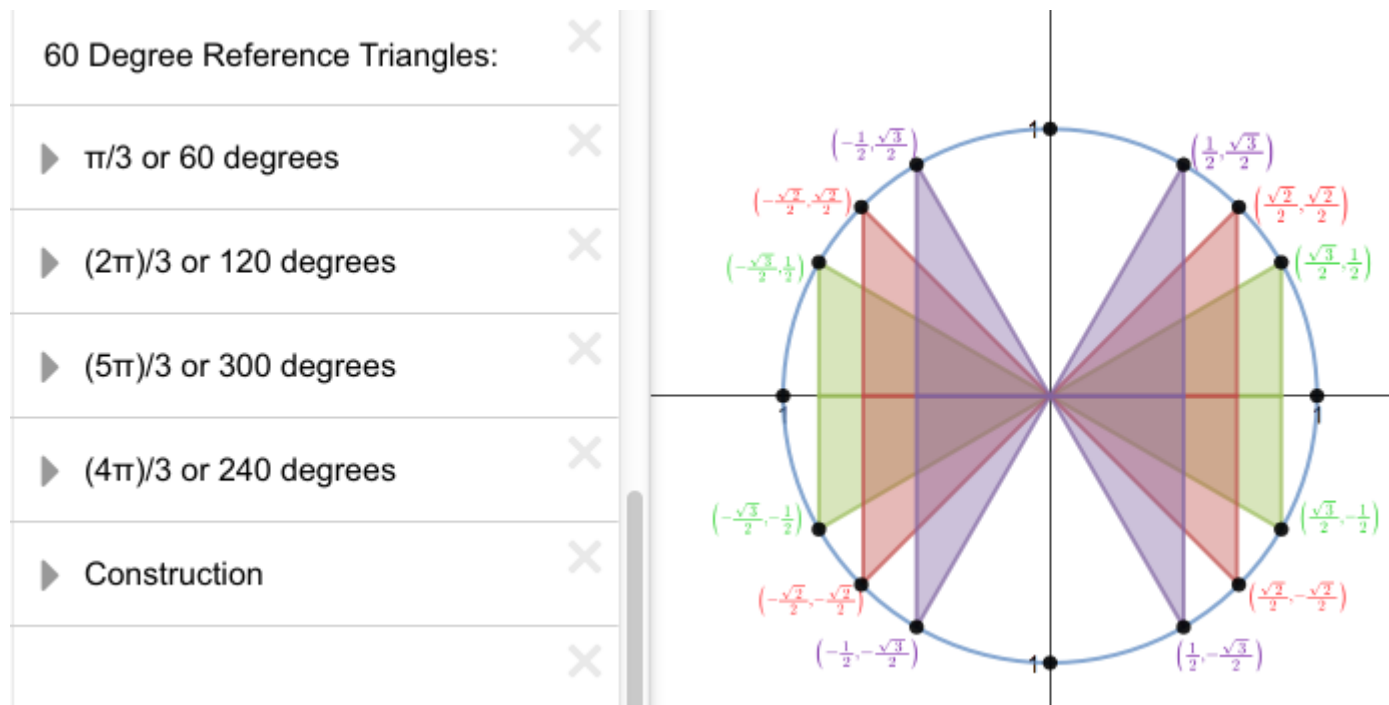
1. Click the circle in front the the radian or degrees for the reference triangle.



2. Displayed are both the 30 degree and the 45 degree reference triangles.



3. You can display one, several, or all of the reference triangles.



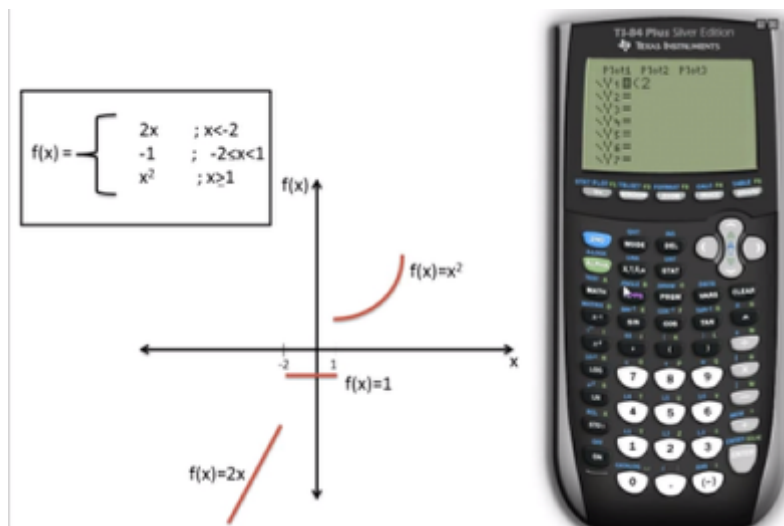
Chapter 2

Piecewise Functions for TI-84 and Desmos Videos

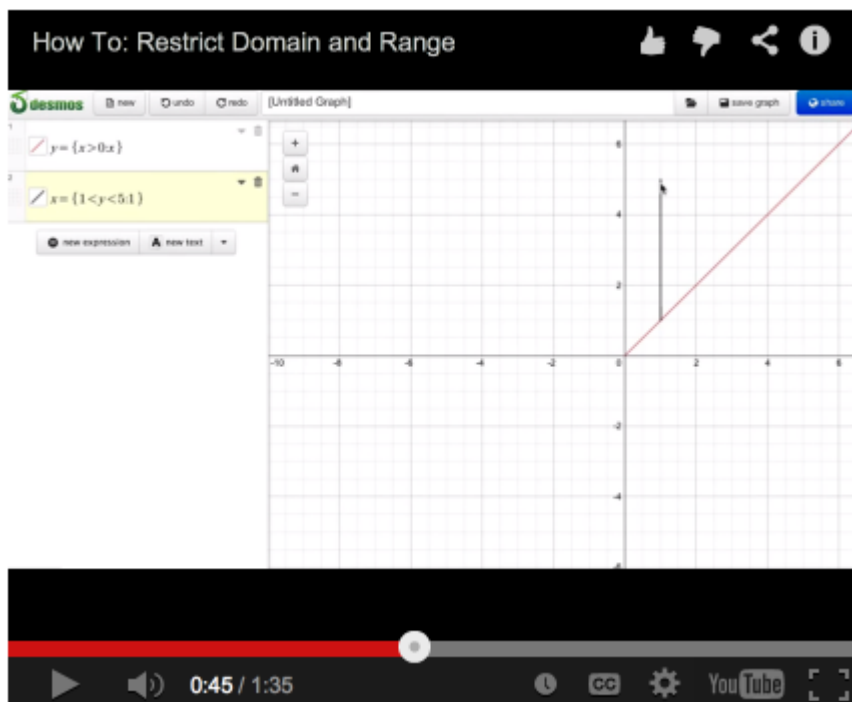
Click on the link below for the "Piecewise Functions for TI-84 and Desmos Videos"

[Piecewise Functions for TI-84 Video](#) 
[Piecewise Functions for Desmos Video](#) 

1. Mike Gaffney You Tube Video:



2. Desmos video:





PC 2.1.1: 2-2 Student eTool

Click on the link below for the "2-2 Student eTool".

[2-2 Student eTool \(Desmos\)](#)

1. PC 2-2 Student eTool:

2-2 Student eTool

Fill in the values in the table below. Then write the piecewise function below the table. Check your graph for accuracy!

Let x equal the number of hours after 7:00 pm. Let y equal the amount earned.

x	y
.....	4
2	
3	

PC 2.2.2: Sigma eTool

Click on the link below for the "Sigma eTool".

[Sigma eTool \(Desmos\)](#)

1. Modify the eTool by:

- Typing in your functions
- Moving the sliders to adjust the upper and lower indices.

The screenshot shows the Sigma eTool interface with the following components and annotations:

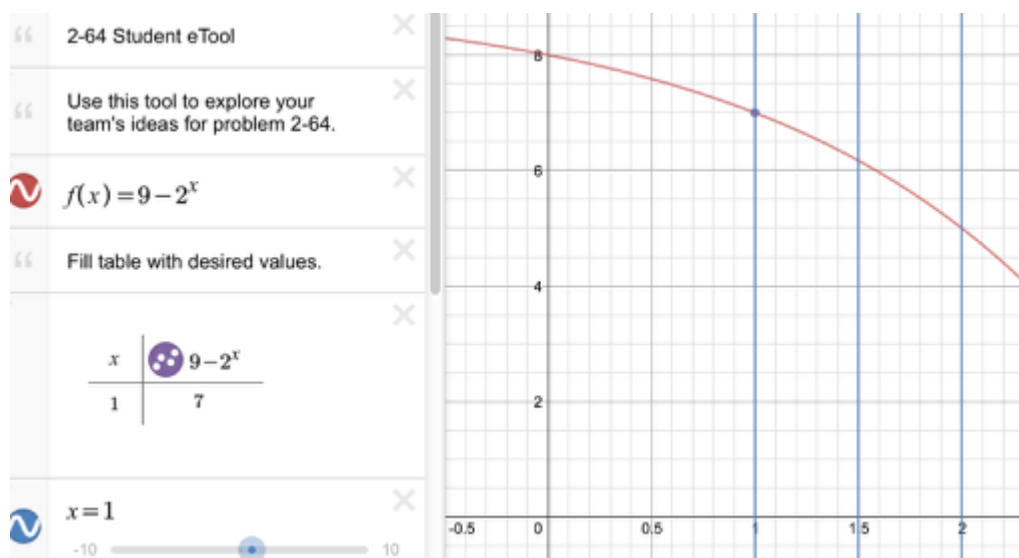
- Panel 1:** Titled "Sigma eTool".
- Panel 2:** Contains instructions: "Type your own expression over the argument. Change the index by moving the sliders. Click on the end numbers of the sliders to modify the beginning the end numbers." A yellow circle with the number "1" and a red arrow points to the expression $\sum_{n=a}^b n^2$.
- Panel 3:** Displays the expression $\sum_{n=a}^b n^2$. A yellow circle with the number "2" and a red arrow points to the lower index a . To the right is an "Answer" box showing "= 77".
- Panel 4:** Shows the slider for $a = 4$ on a scale from 0 to 10. A red arrow points from the yellow circle "2" to the slider's blue dot.
- Panel 5:** Shows the slider for $b = 6$ on a scale from 0 to 10. A red arrow points from the yellow circle "3" to the slider's blue dot.
- Panel 6:** A yellow circle with the number "3" and a red arrow pointing to the slider for b .

PC 2.3.1: 2-64 Student eTool

Click on the link below for the "2-64 Student eTool".

[2-64 Student eTool \(Desmos\)](#)

1. 2-64 Student eTool

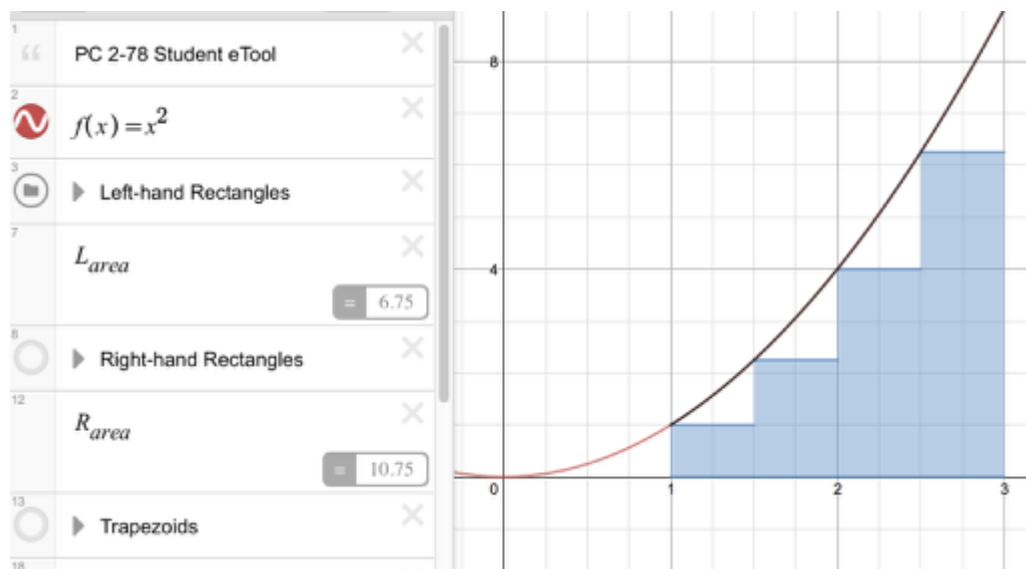


PC 2.3.2: 2-78 Student eTool

Click on the link below for the "2-78 Student eTool".

[2-78 Student eTool \(Desmos\)](#)

1. PC 2-78 Student eTool

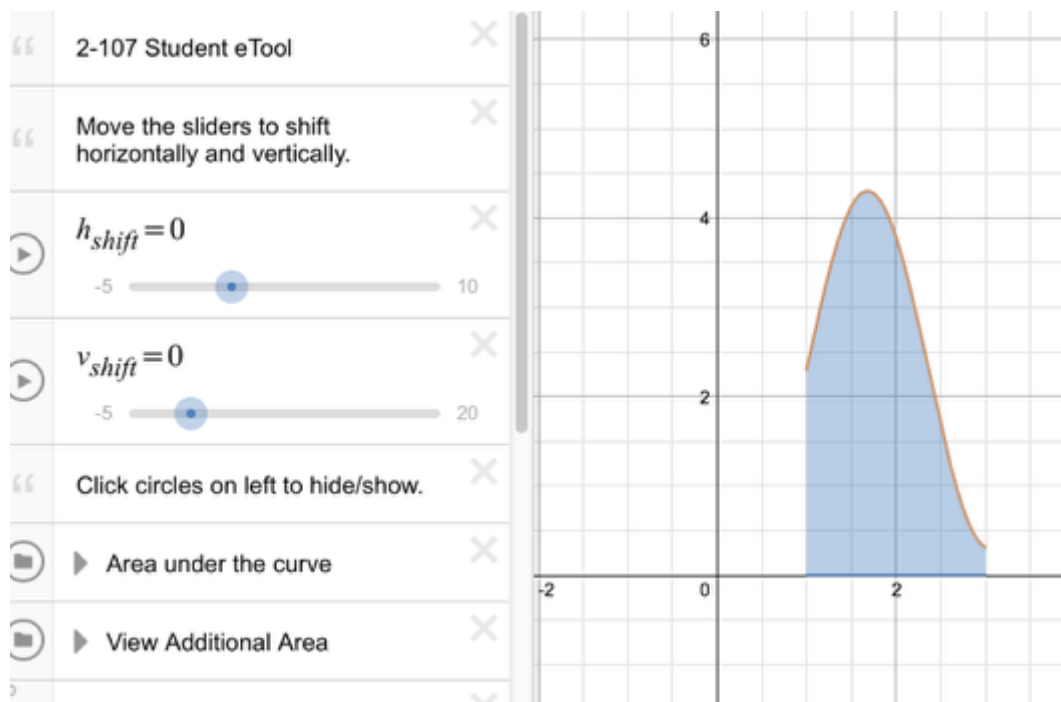


PC 2.3.4: 2-107 Student eTool

Click on the link below.

[2-107 Student eTool \(Desmos\)](#)

PC 2-107 Student eTool:



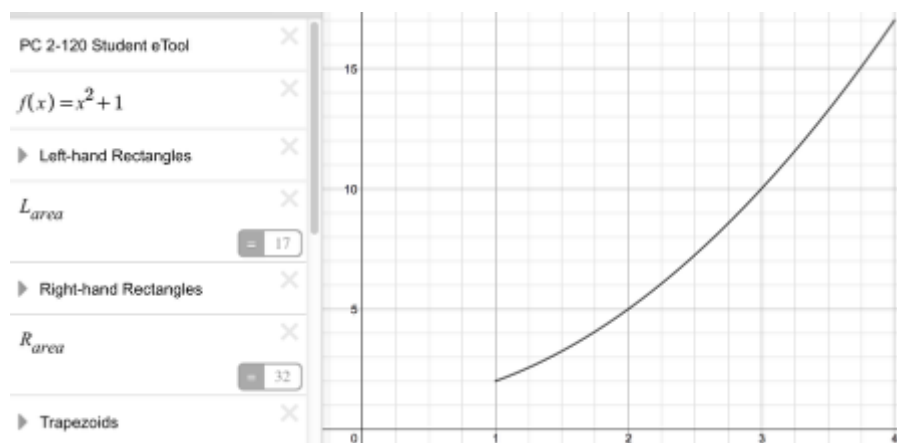
PC 2.3.5: 2-120 Student eTool

Click on the link below for the "2-120 Student eTool".

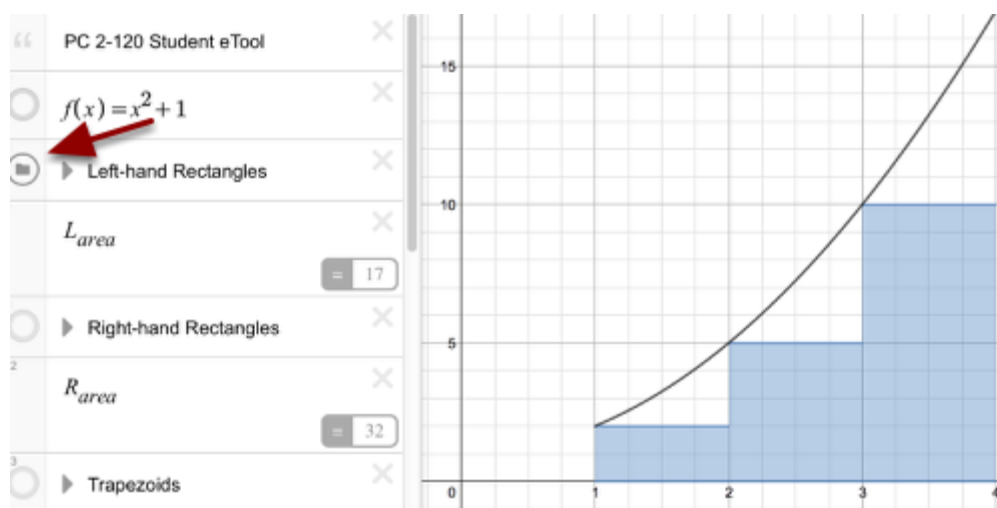
[2-120 Student eTool \(Desmos\)](#)

1. Select among:

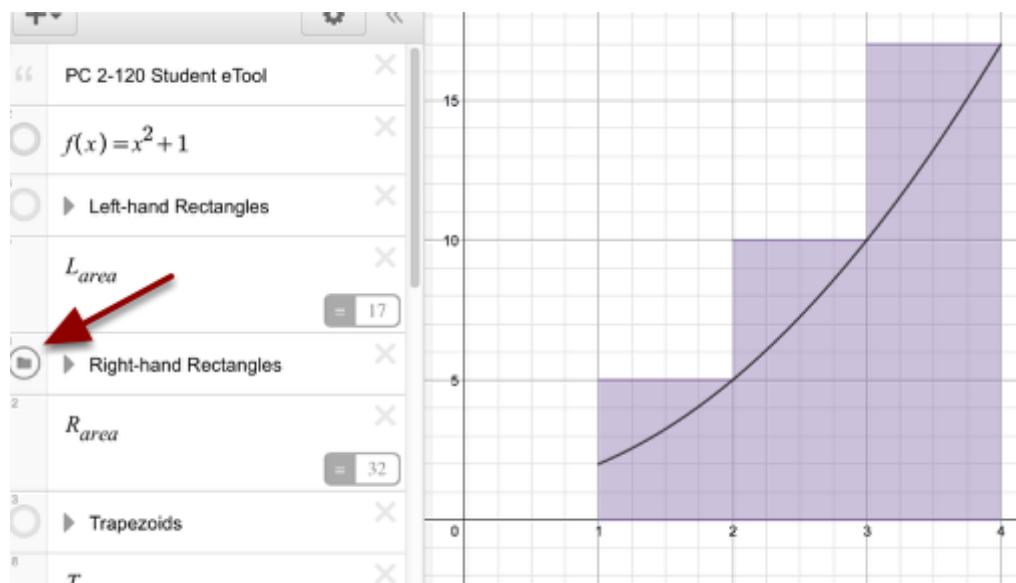
- Left-hand Rectangles
- Right-hand Rectangles
- Trapezoids



2. Left-hand Rectangles:



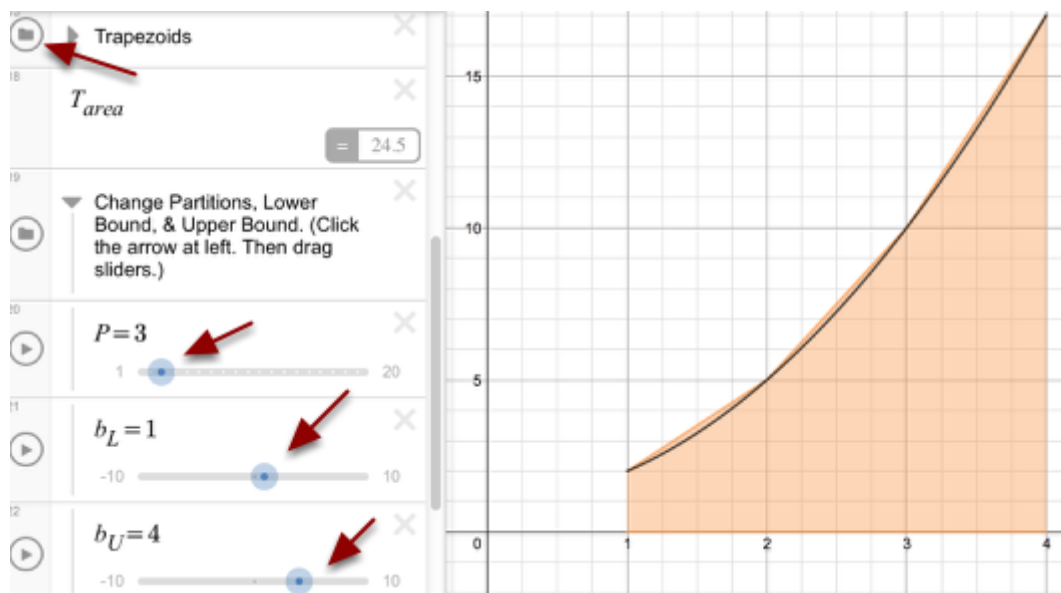
3. Right-hand Rectangles:



4. Trapezoids:

Also:

- Select number of partitions
- Change Lower Bound
- Change Upper Bound

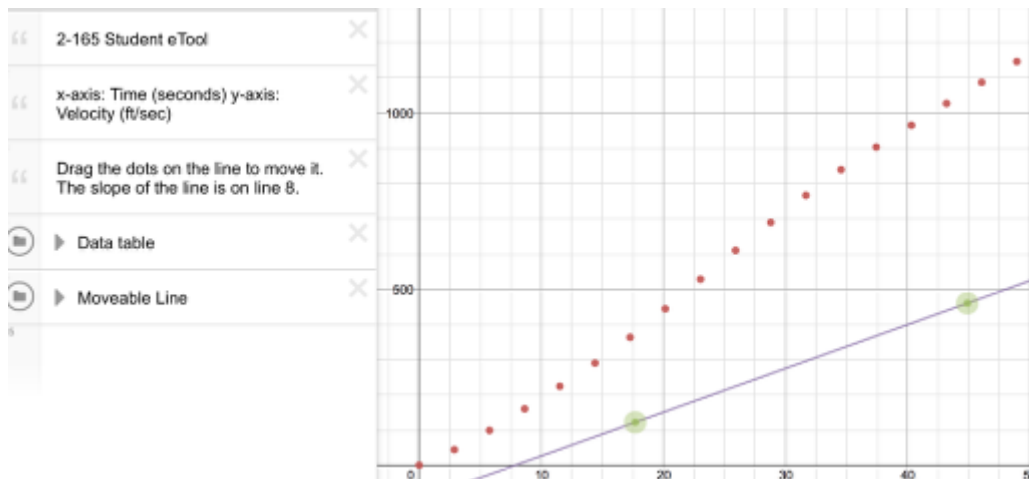


PC 2.3.8: 2-165 Student eTool

Click on the link below for the "2-165 Student eTool".

[2-165 Student eTool \(Desmos\)](#)

1. 2-165 Student eTool



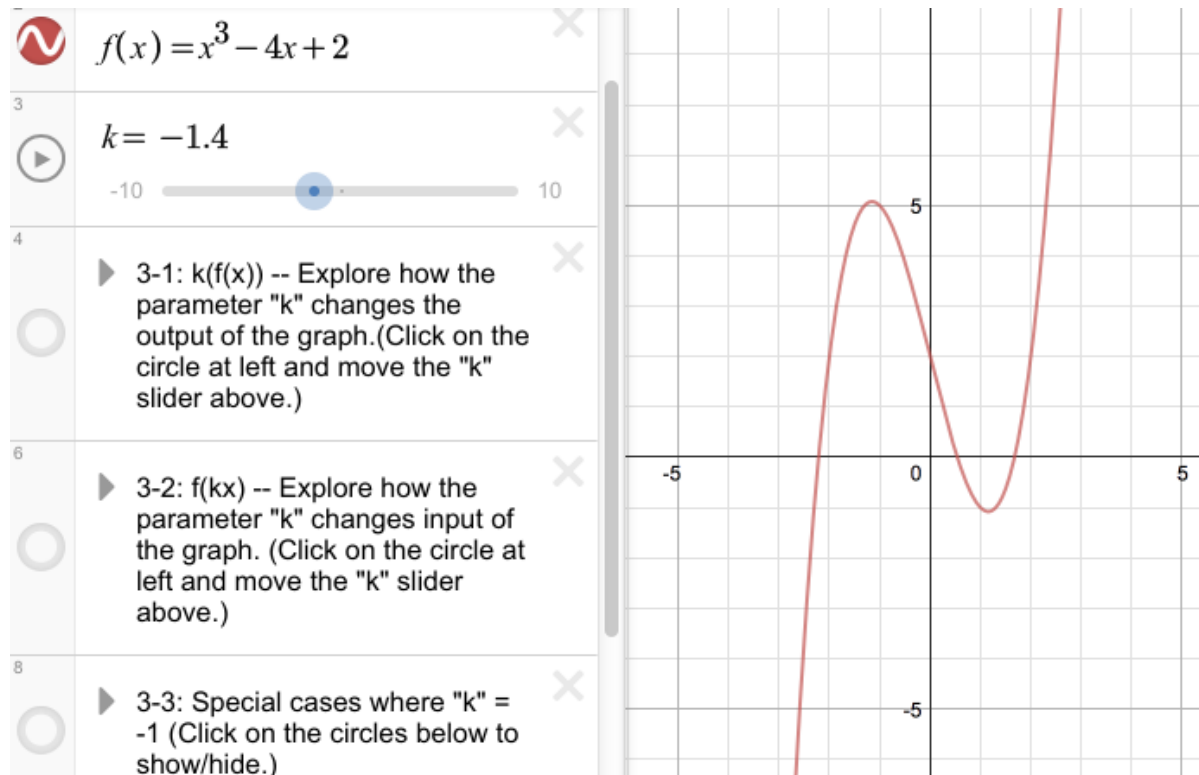
Chapter 3

PCT 3.1.1: 3-1 & 3-2 & 3-3 Student eTools

Click on the link below.

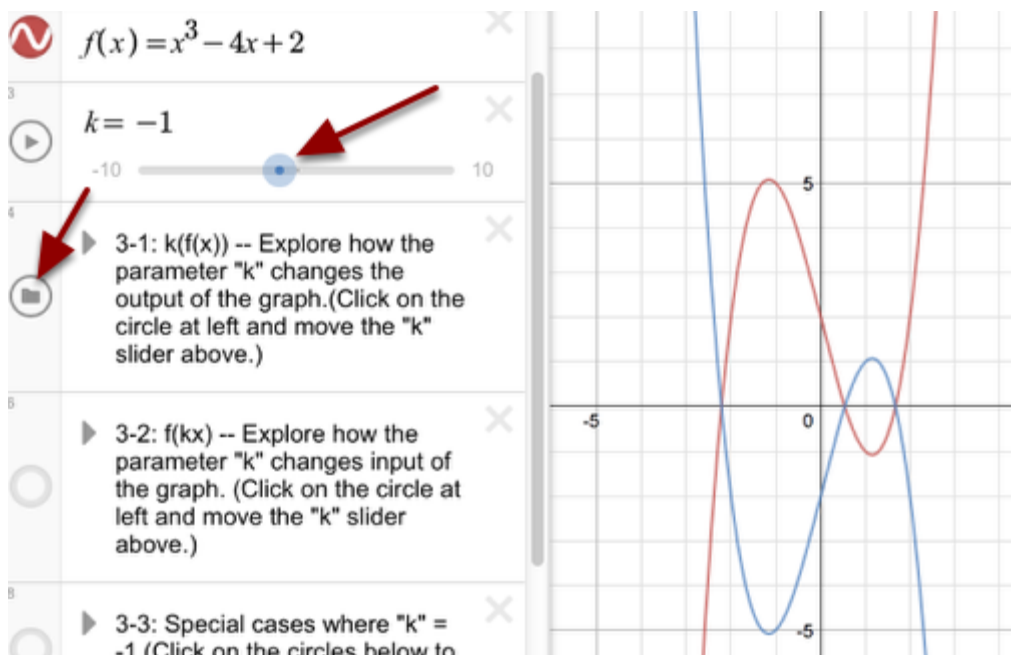
[PCT 3-1 & 3-2 & 3-3 Student eTool \(Desmos\)](#)

1. PCT 3-1 & 3-2 & 3-3 Student eTools:

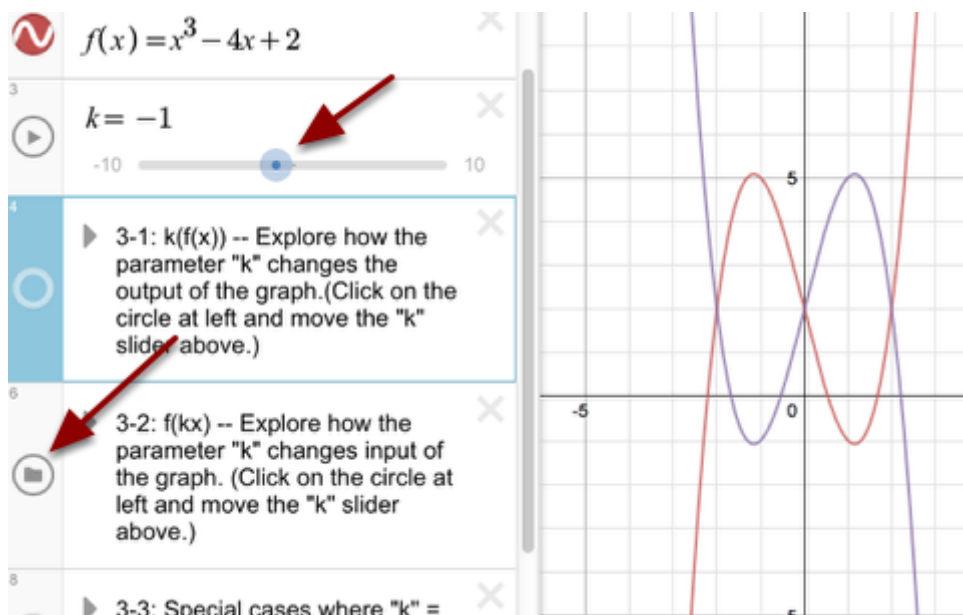


2. 3-1: The various parts are indicated below.

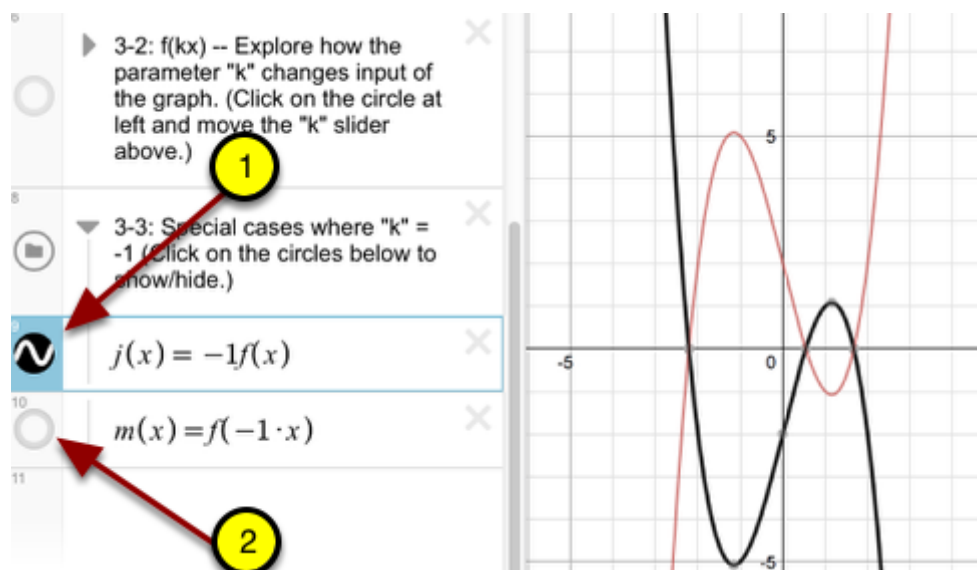
- Move the slider for various values of "k".
- Show/Hide the various parts by clicking the circle in front of each part.



3. 3-2:



4. 3-3 has two functions associated with it.

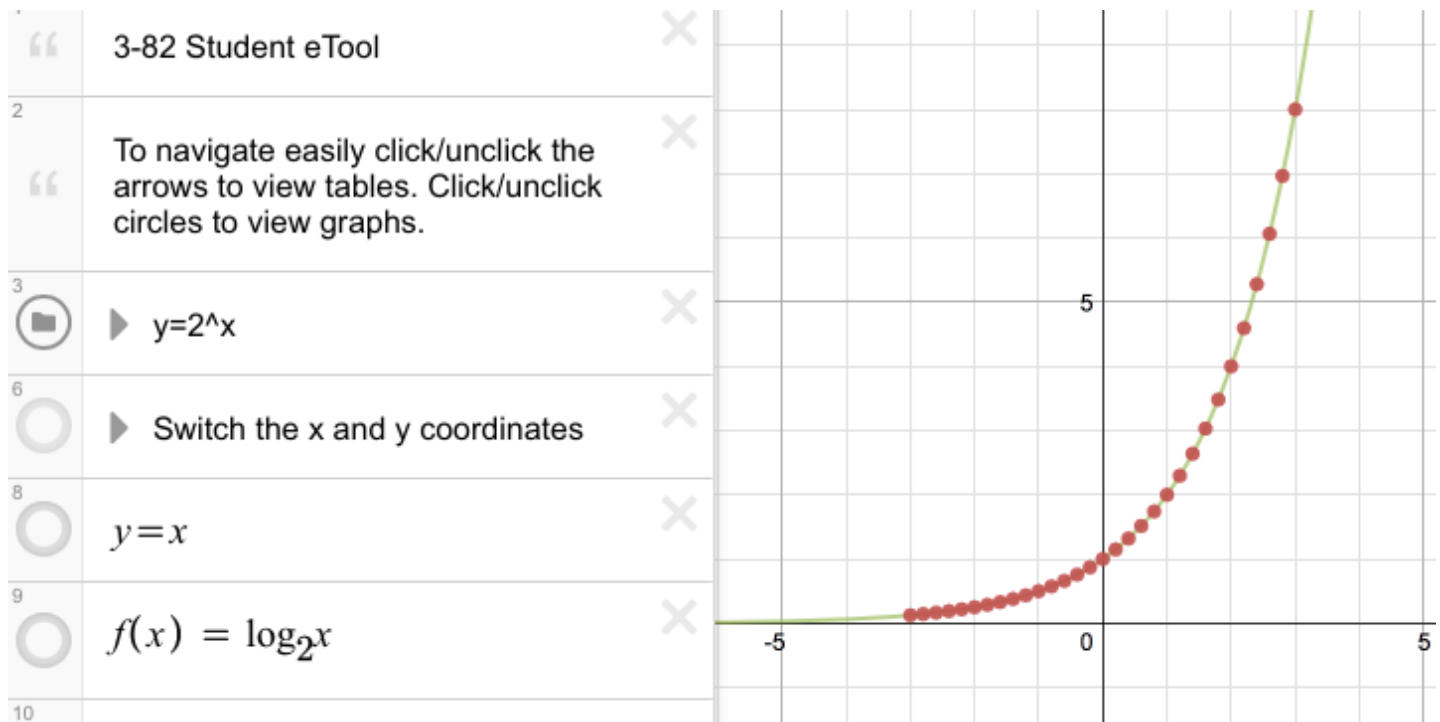


PCT 3.2.3: 3-82 Student eTool

Click on the link below.

[3-82 Student eTool \(Desmos\)](#)

PCT 3-82 Student eTool:



Switch the x and y coordinates:

- Click the arrows to view the tables.
- Switch the x and y coordinates by typing in the new y-values.

	2.2	4.5947934
	2.4	5.2780316
	2.6	6.0628663
	2.8	6.9644045
	3	8

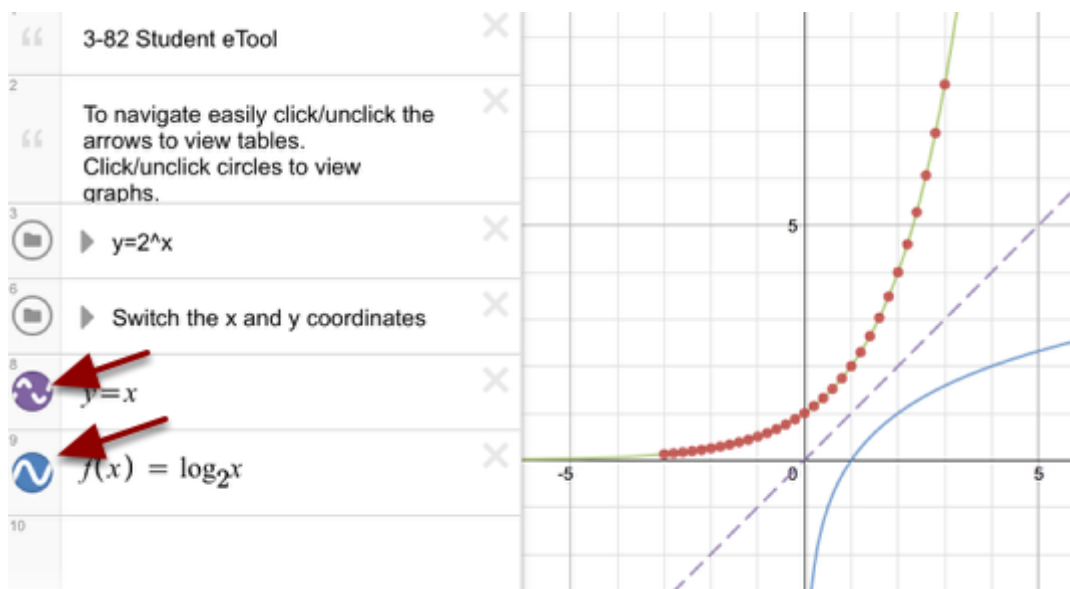
6  Switch the x and y coordinates

7

x	
0.125	
0.1436	
0.1649	

Also view:

- $y = x$ graph
- Logarithmic graph
- (Click the circles in front of each.)



Chapter 4

PCT 4.1.3: Sine and Cosine Curves with Unit Circle (Desmos)

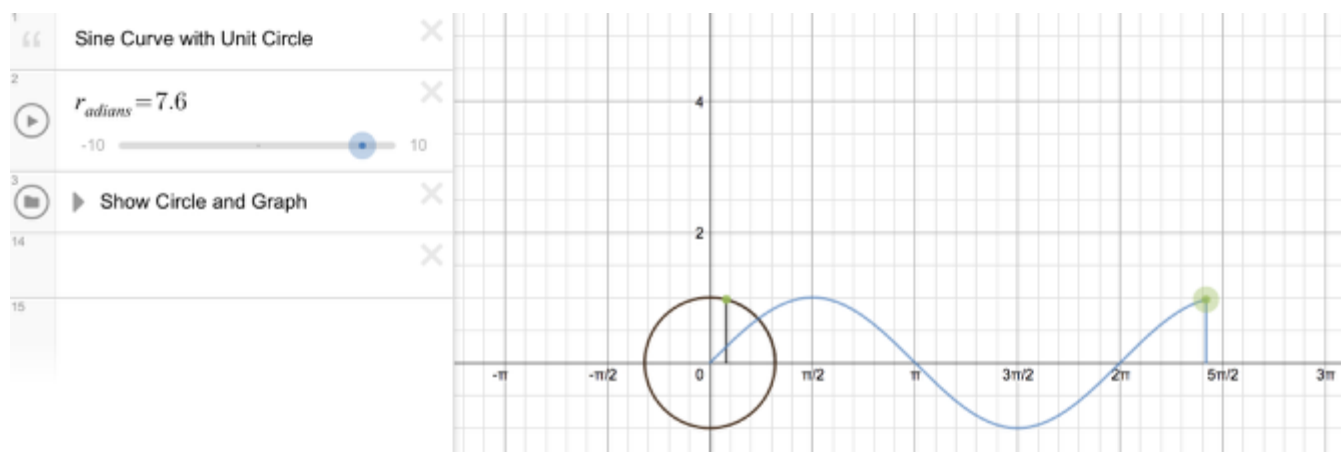
Click on the links below.

[Sine Curve with Unit Circle](#) (Desmos)

[Cosine Curve with Unit Circle](#) (Desmos)

1. Sine Curve with Unit Circle:

- Move the Radian slider to show the graph.



2. Cosine Curve with Unit Circle:

- Move the Radian slider to show the graph.

