Algebra Connections

Table of Contents

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)

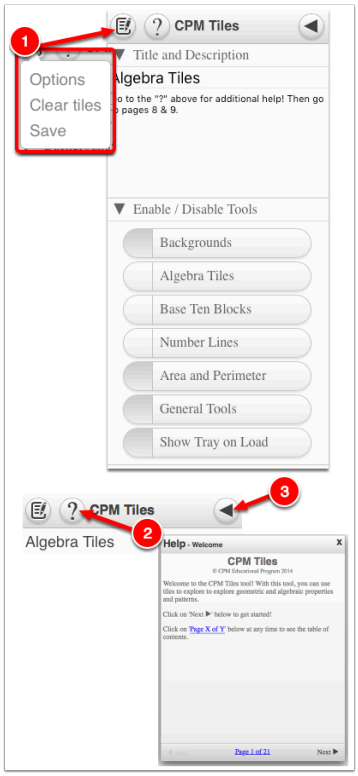
1. The top bar has three main parts: Pen & Paper Icon, '?' Icon, and the Arrow Icon.

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.



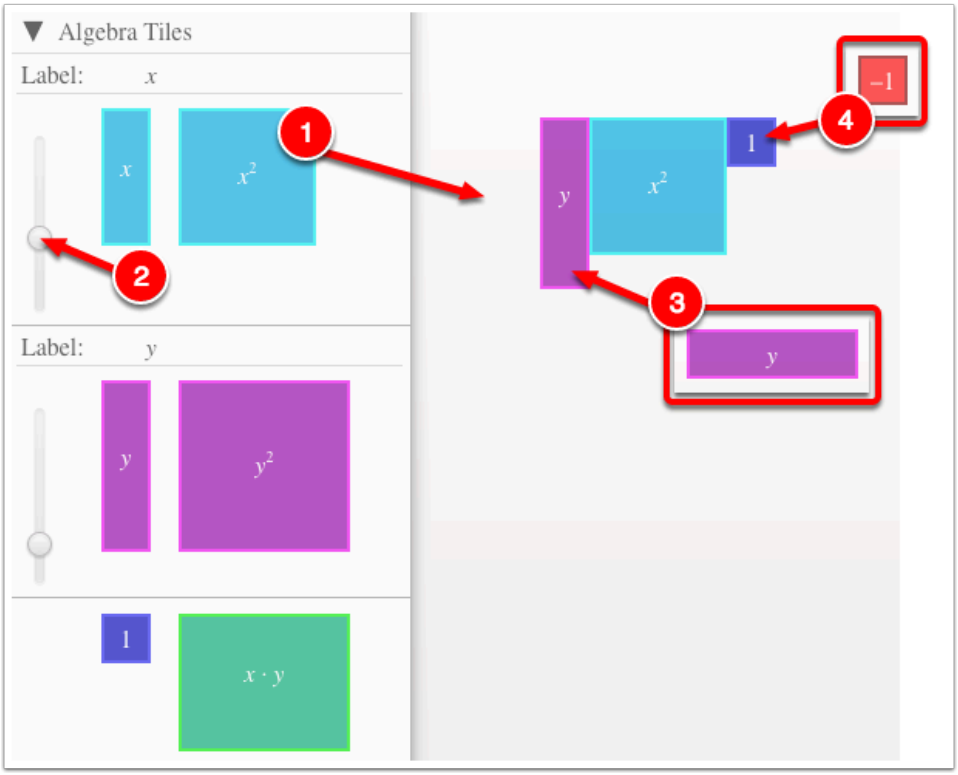
2. Drag tiles from the tray at the left to the display area at the right.

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

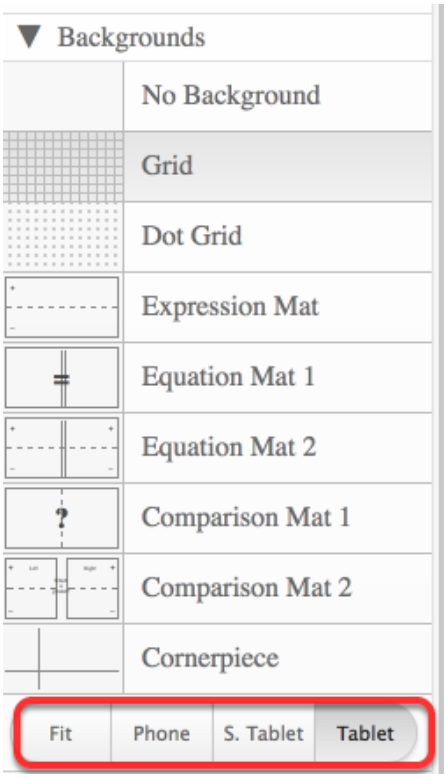
2. Use the sliders in the tray to change the size of the tiles.

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.

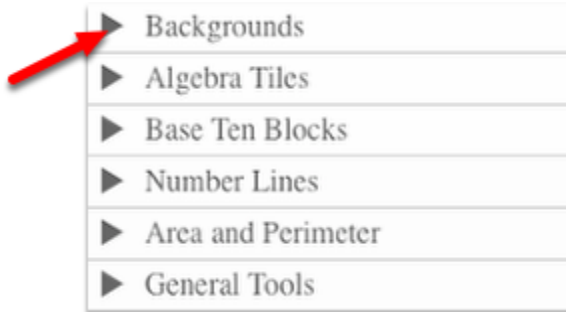


3. Choose from a variety of different mats. Also choose from a variety of sizes to fit on various devices.



4. Choose from a variety of different tiles:

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



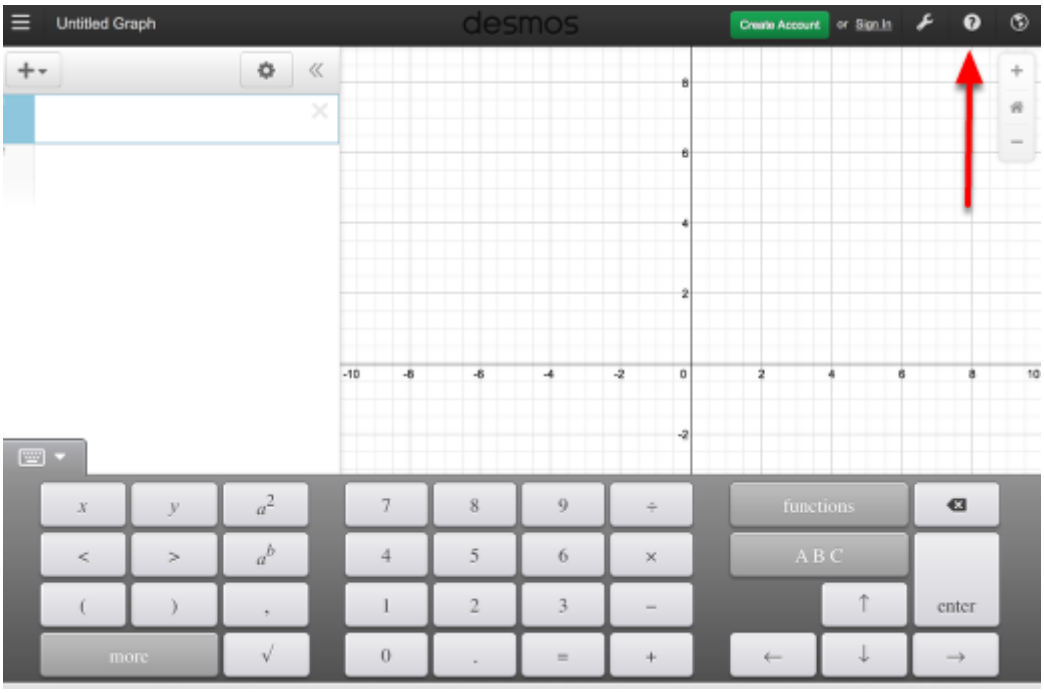
Desmos Graphing Calculator

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

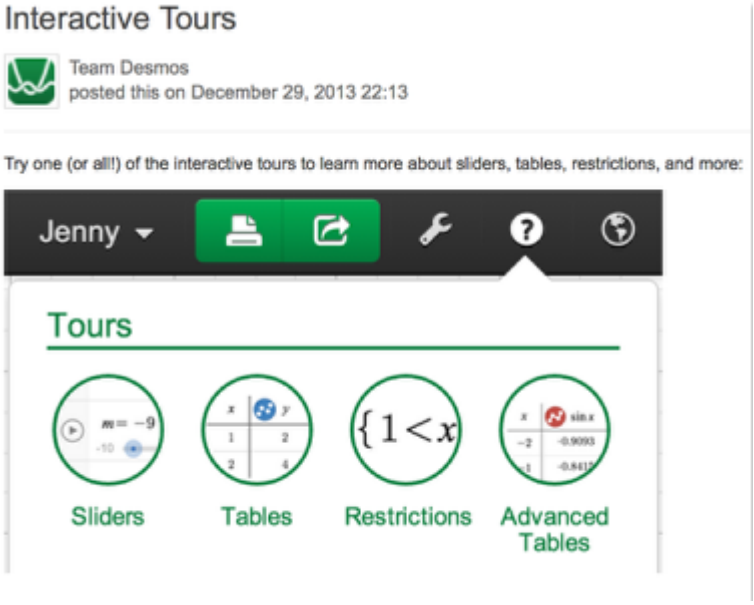
1. Click on all of the buttons. Try it out! For extra help, click the "?".



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

Sliders
Tables
Advanced Tables
Restrictions

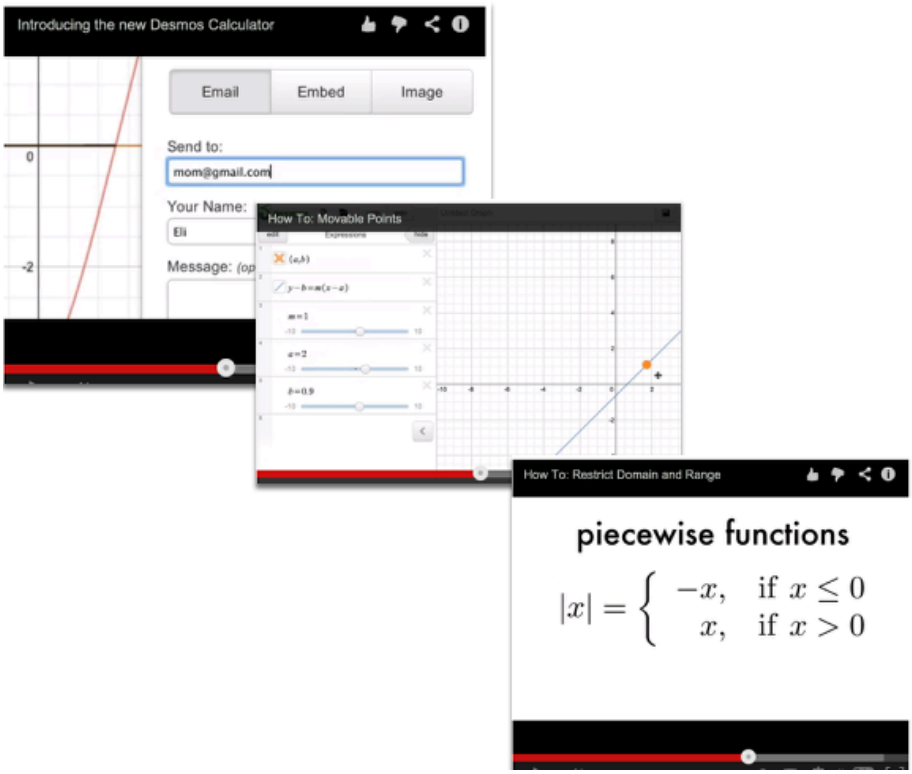
3. The interactive tours will NOT let you make a mistake! Try the links above!



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]

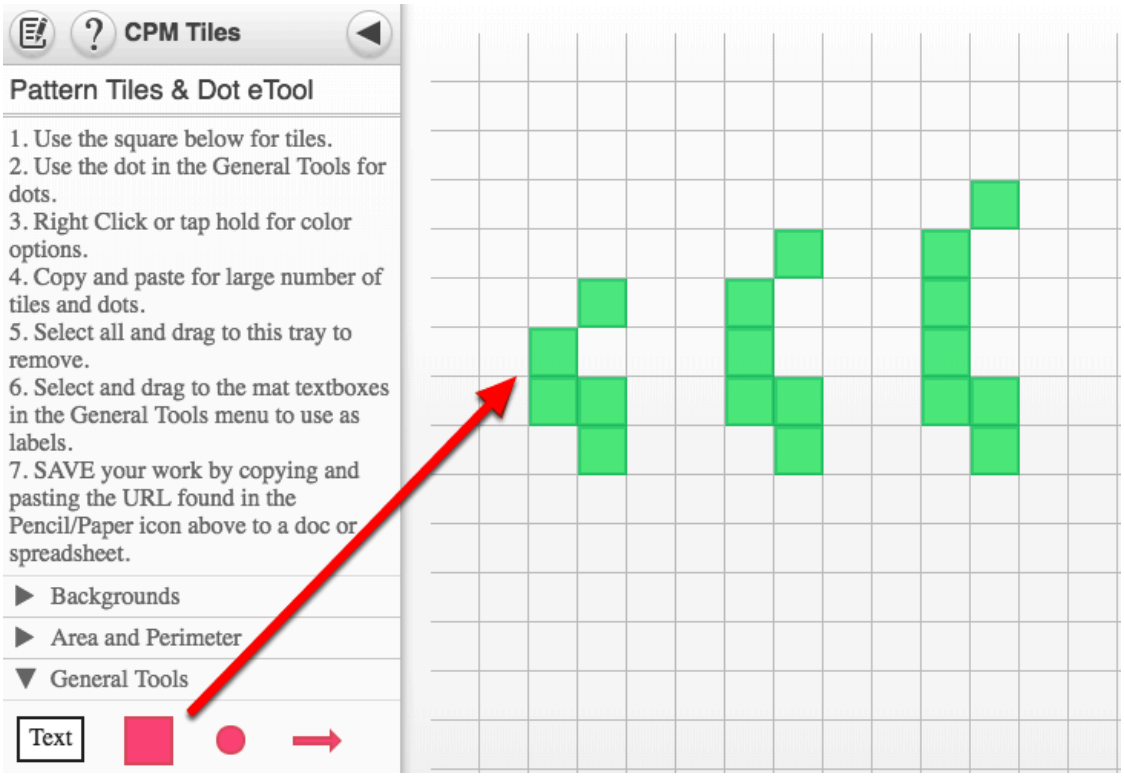
Pattern Tile & Dot Tool (CPM)

Click on the link below.

Pattern Tile & Dot Tool

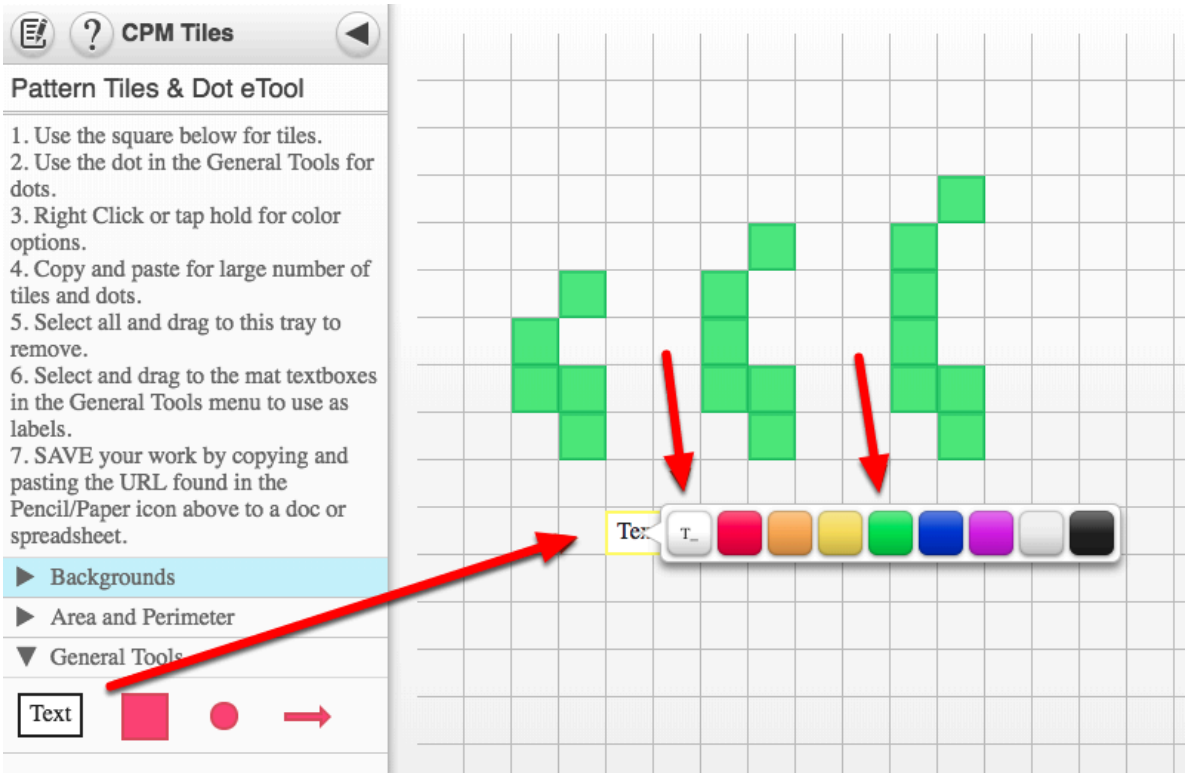
1. Drag tiles from the tray to the Display area.

- Add tiles and copy and paste them to the display area.
- Select all tiles and drag to the tray to remove the tiles.



2. Textboxes and Dots

- Located in the General Tools
- Drag out and choose border/no border and color.
- Double click to rotate.
- Click to add text.


CPM Tiles
Pattern Tiles & Dot eTool
1. Use the square below for tiles.
2. Use the dot in the General Tools for dots.
3. Right Click or tap hold for color options.
4. Copy and paste for large number of tiles and dots.
5. Select all and drag to this tray to remove.
6. Select and drag to the mat textboxes in the General Tools menu to use as labels.
7. SAVE your work by copying and pasting the URL found in the Pencil/Paper icon above to a doc or spreadsheet.
Backgrounds
Area and Perimeter
General Tools
Text

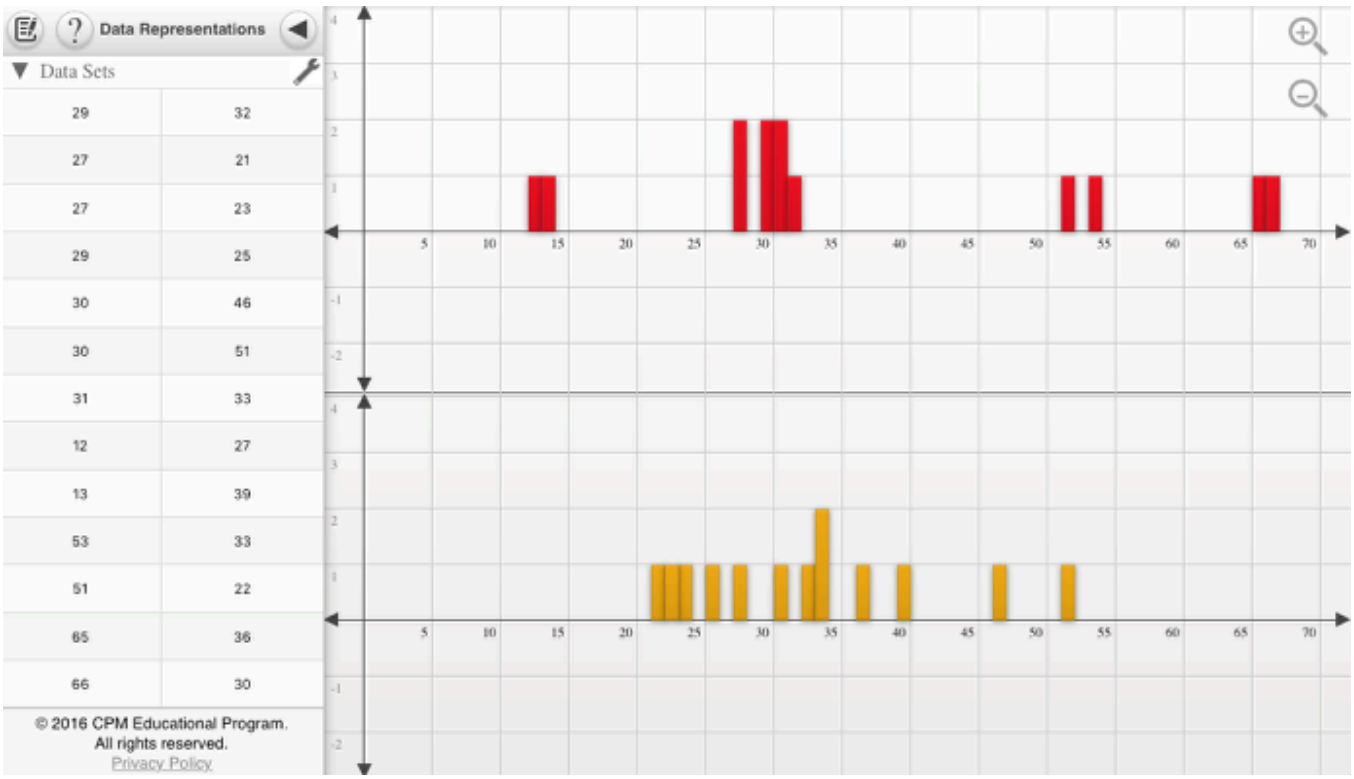
Data Representations (CPM)

Click the link below for “CPM Data Representations"

CPM Data Representations

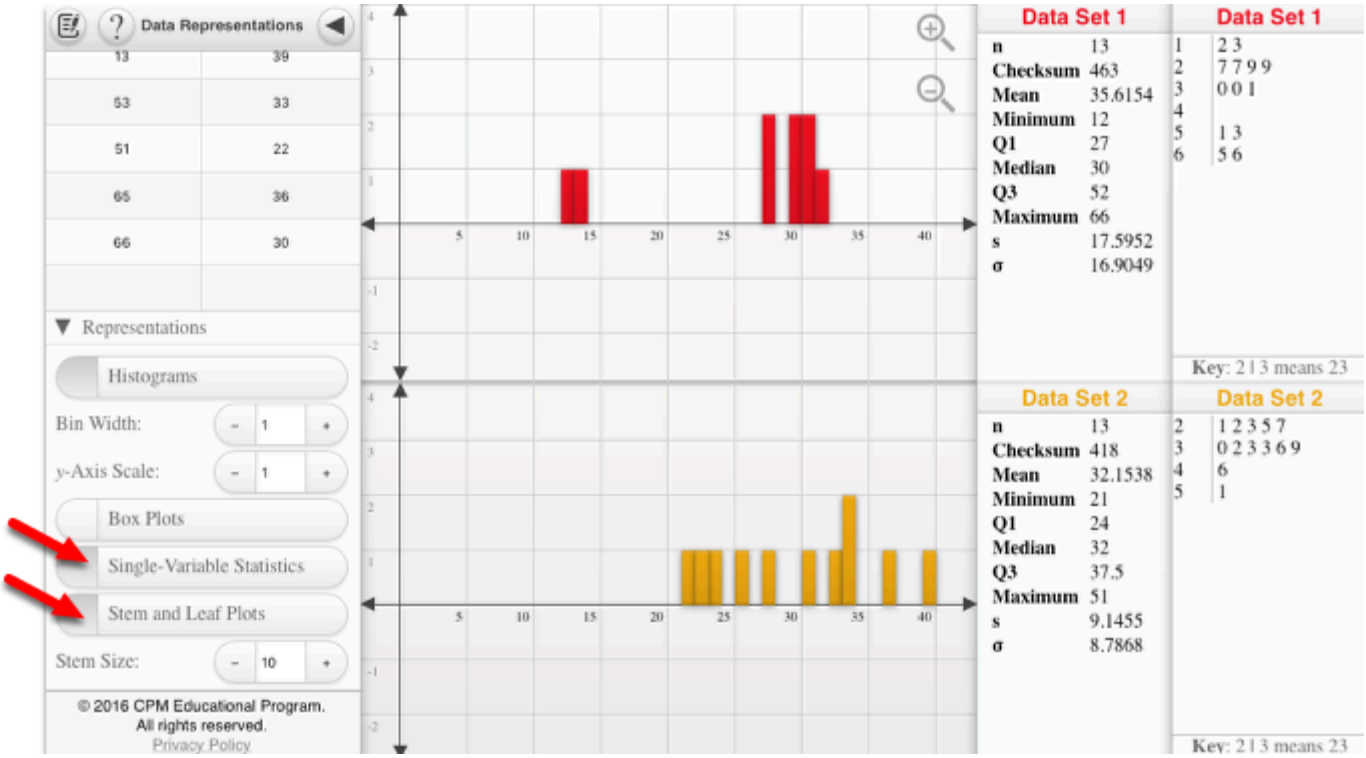
1. CPM Data Representations:

Type in up to two sets of data into the columns under the Data Sets tab. Click the wrench to sort or change the graph color. Click the Data Sets arrow to hide the data.



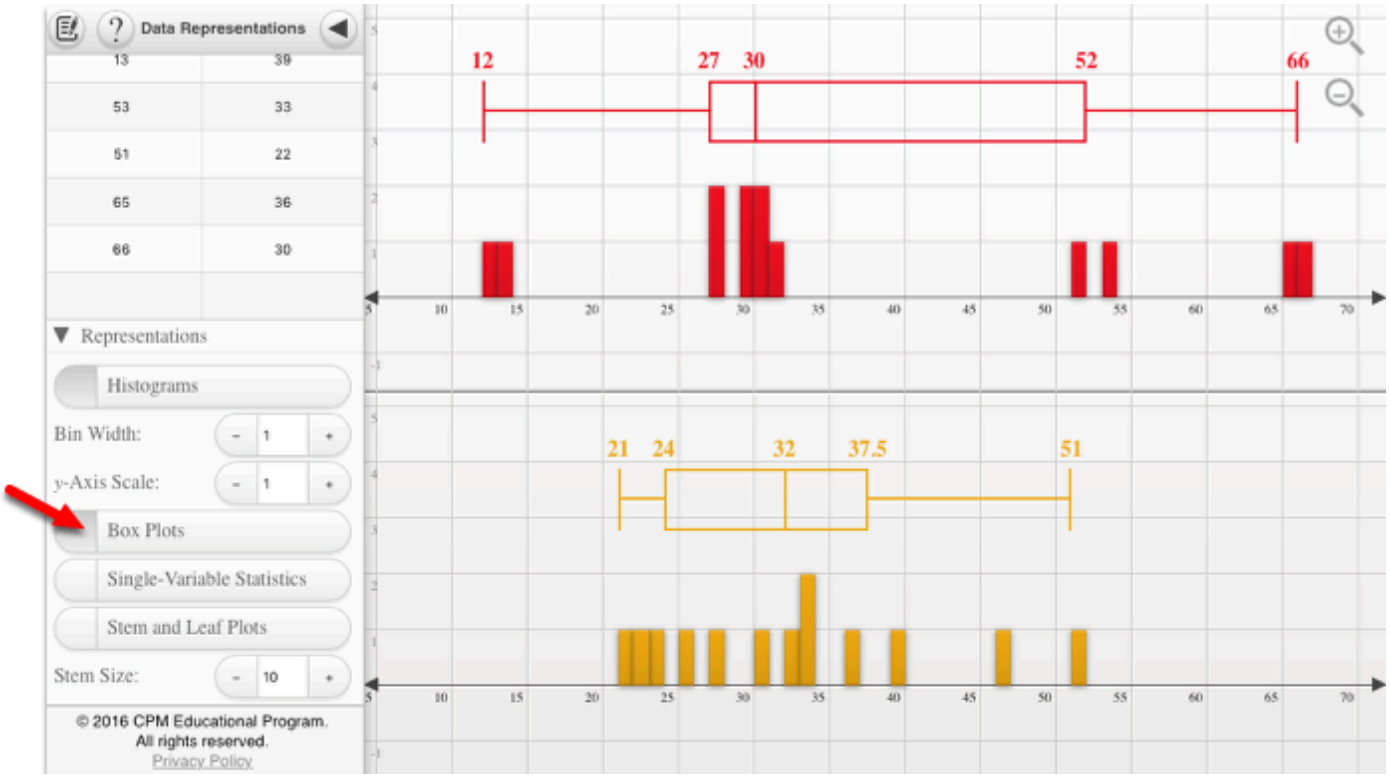
2. Single-Variable Statistics or the Stem and leaf Plots:

When choosing Single-Variable Statistics or the Stem and Leaf Plots from the left tray, the data/plot(s) show from the right. Unclick from the left to close the trays at right.



3. Box Plots

Note: Use the zoom in and out buttons at the upper right to position the histograms in a friendly window. On a computer, you can use the mouse wheel. On a tablet, use two fingers to pinch or spread data.



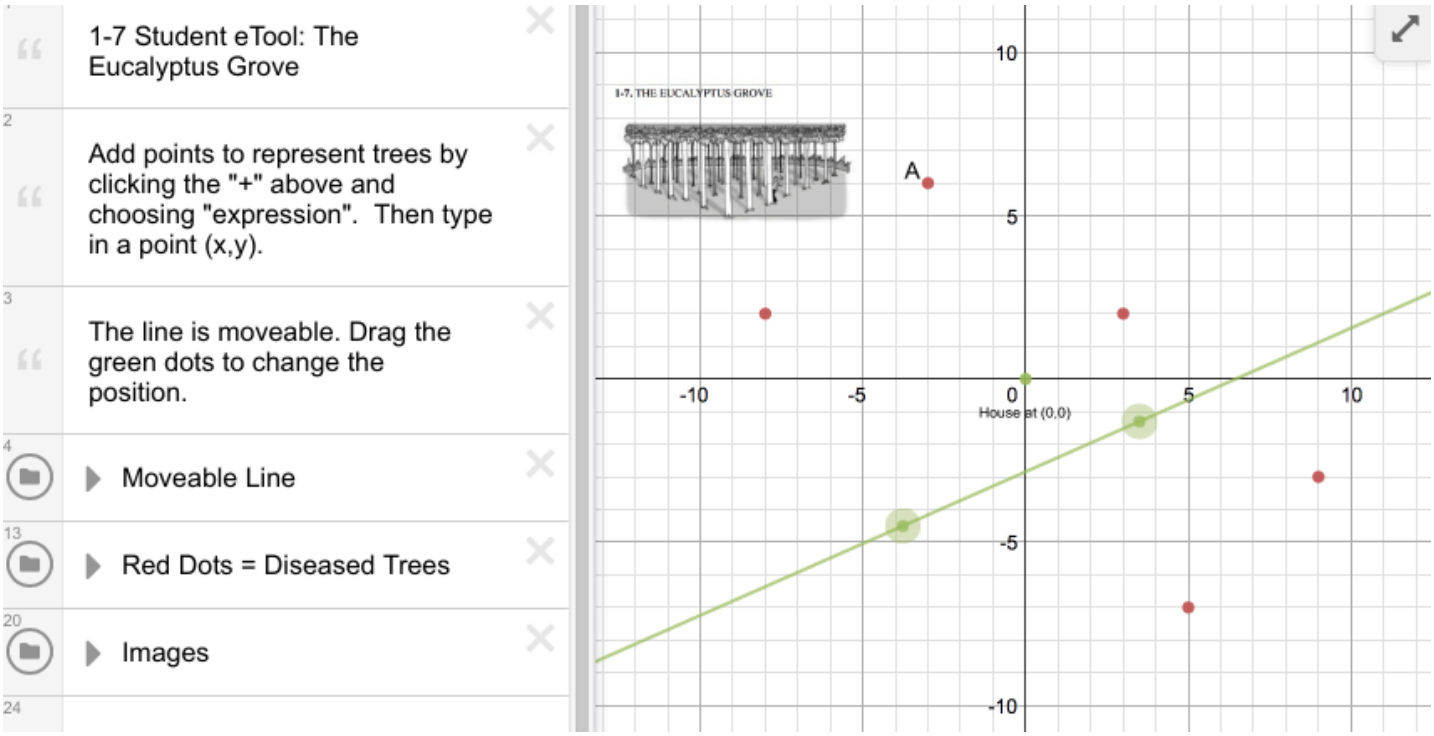
Chapter 1

AC 1.1.2: 1-7 Student eTool (Desmos)

The Eucalyptus Grove

AC 1-7 Student eTool (Desmos)

1. Use this eTool to solve the Eucalyptus Grove problem!



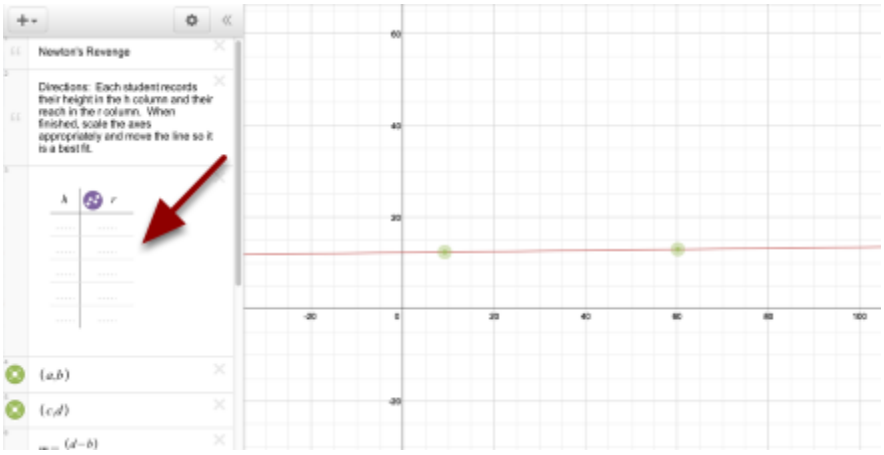
2.

AC 1.1.3: 1-15 Newton's Revenge Student eTool (Desmos)

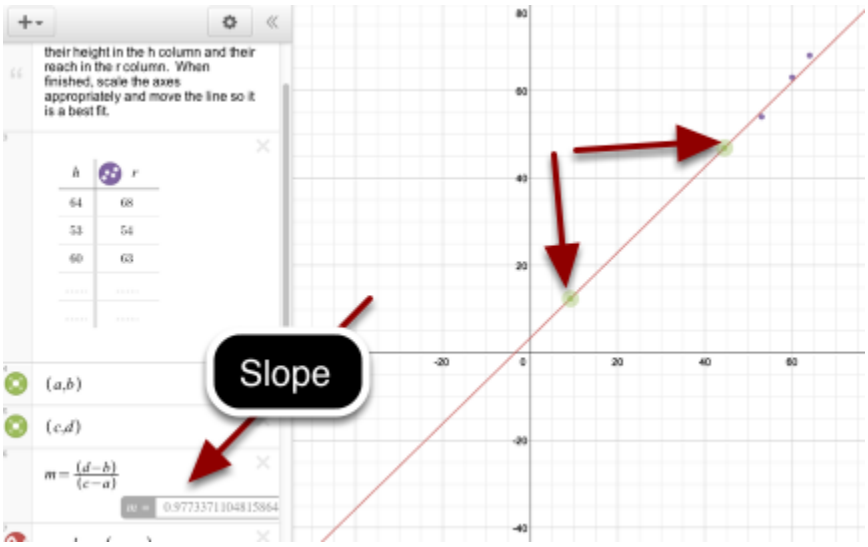
Click on the link below.

Newton's Revenge Student eTool (Desmos)

1. Add data to the table.



2. Drag the moveable line to show a trend in the data. The slope is indicated in the tray at the left.

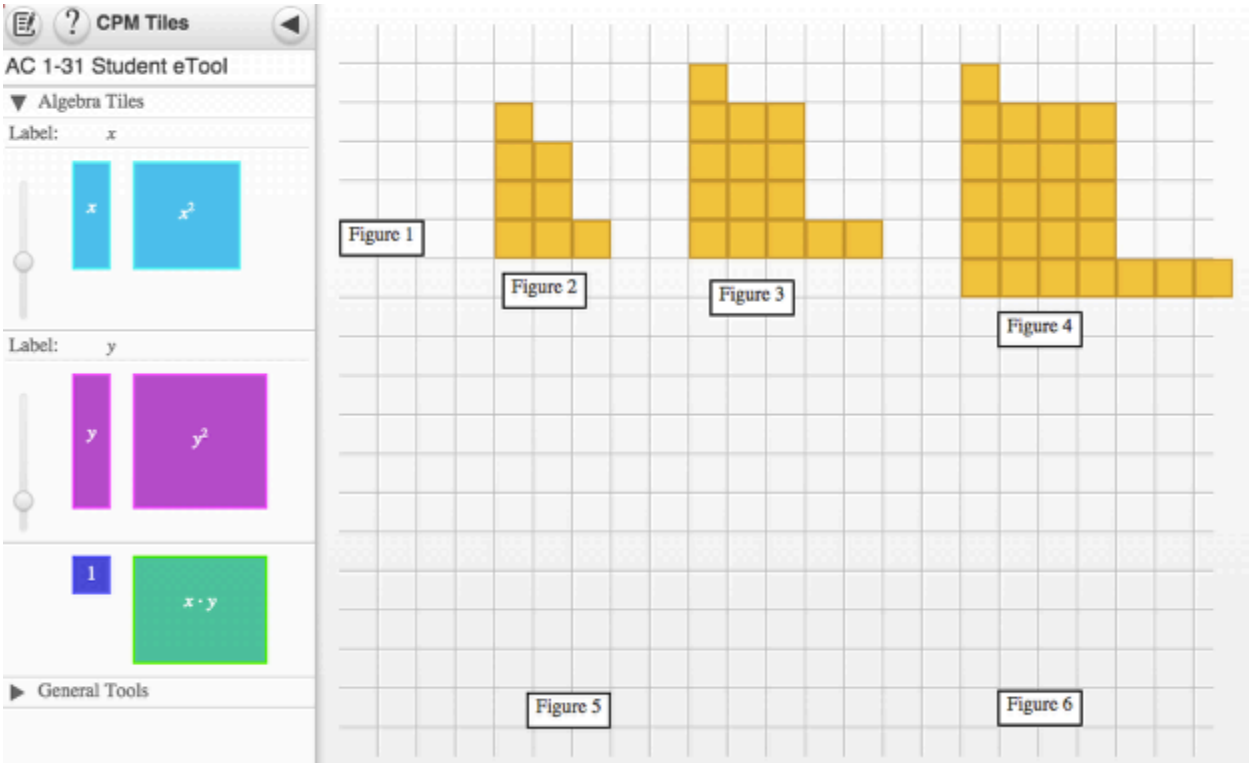


AC 1.1.4: 1-31 & 1-32 Student eTool (CPM)

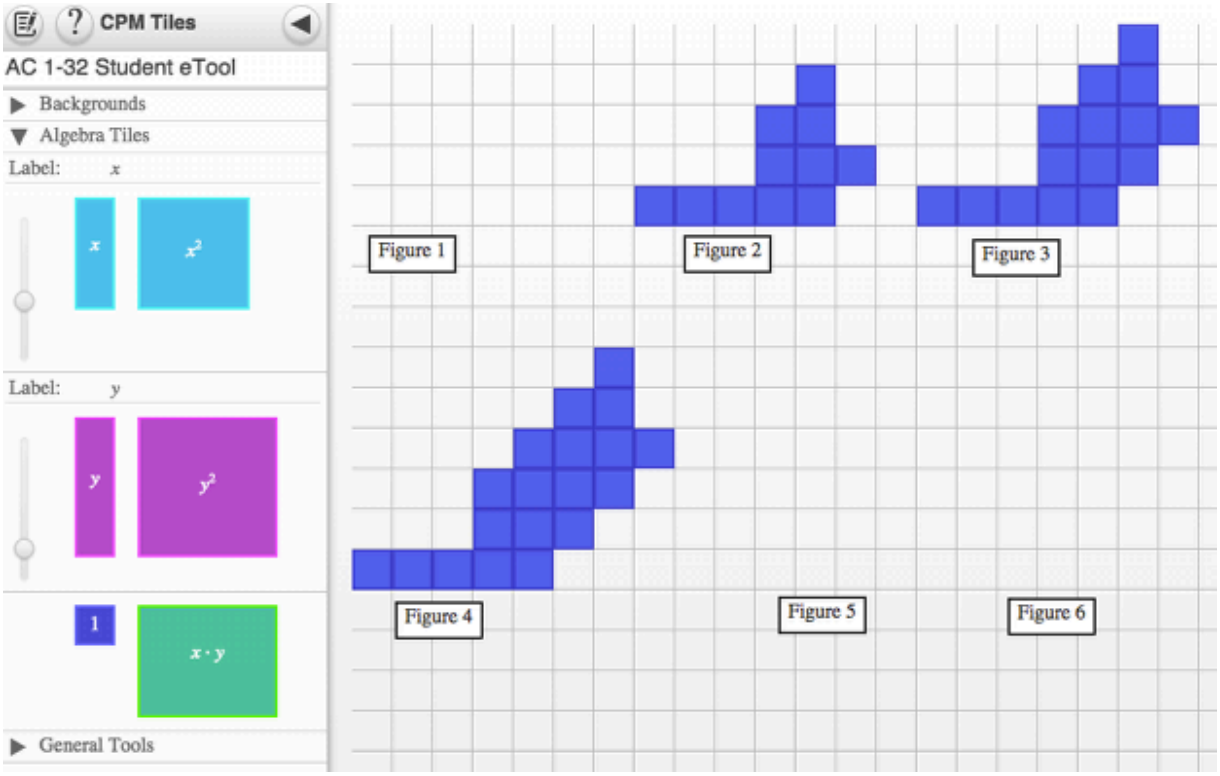
Click on the links below.

1-31 Student eTool (CPM)
1-32 Student eTool (CPM)

1. Drag the tiles from the tray to build Figures 1 and 5.



2. 1-32 Student eTool: Drag tiles to create figures not shown.



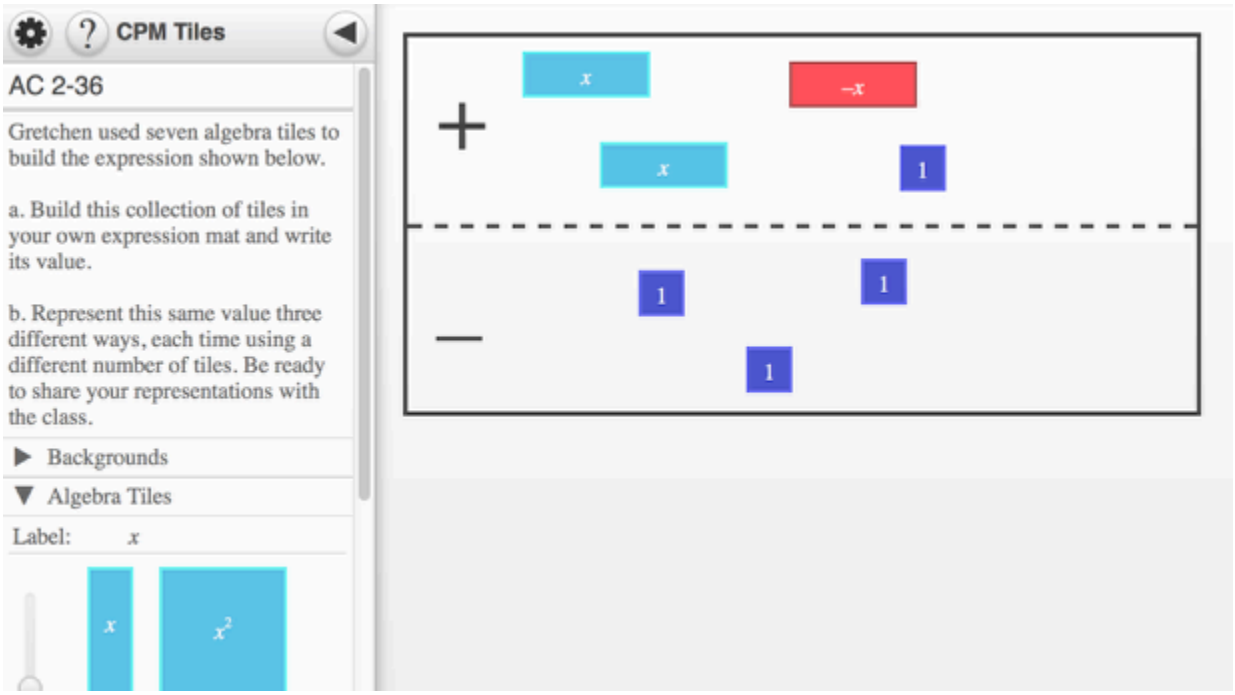
Chapter 2

AC 2.1.4: 2-36 Student eTool (CPM)

Click on the link below.

AC 2-36 Student eTool (CPM)

AC 2-36: Drag tiles to reposition.

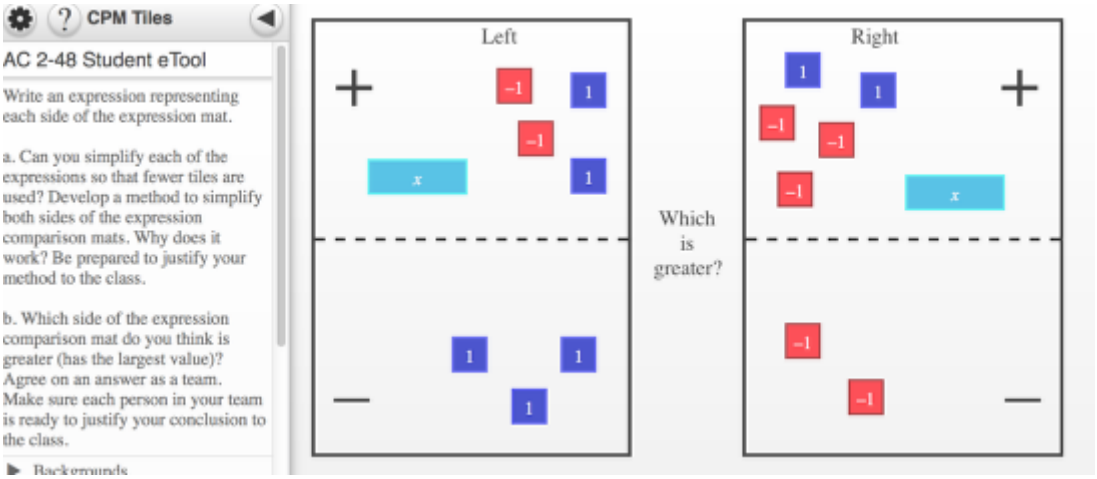


AC 2.1.5: 2-48, 2-50a & 2-50b tiles (CPM)

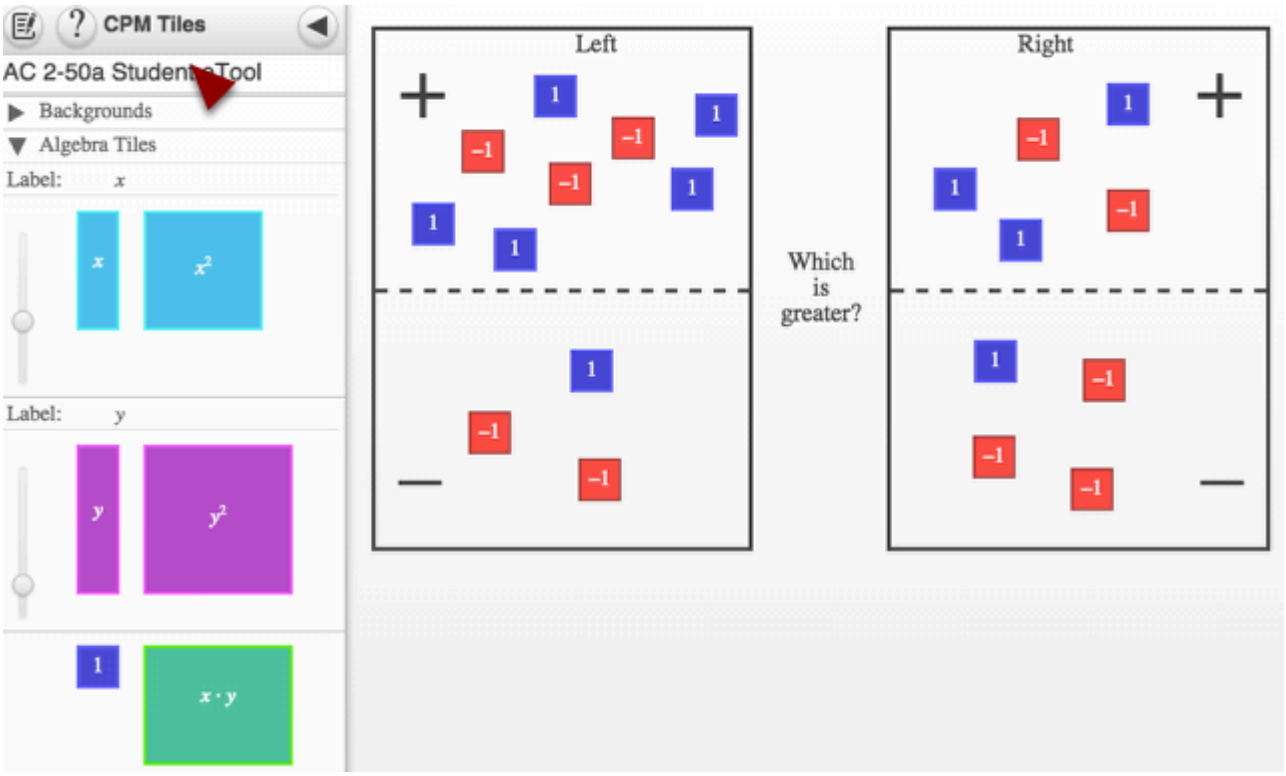
Click on the links below.

2-48 tiles (CPM)
2-50a tiles (CPM)
2-50b tiles (CPM)

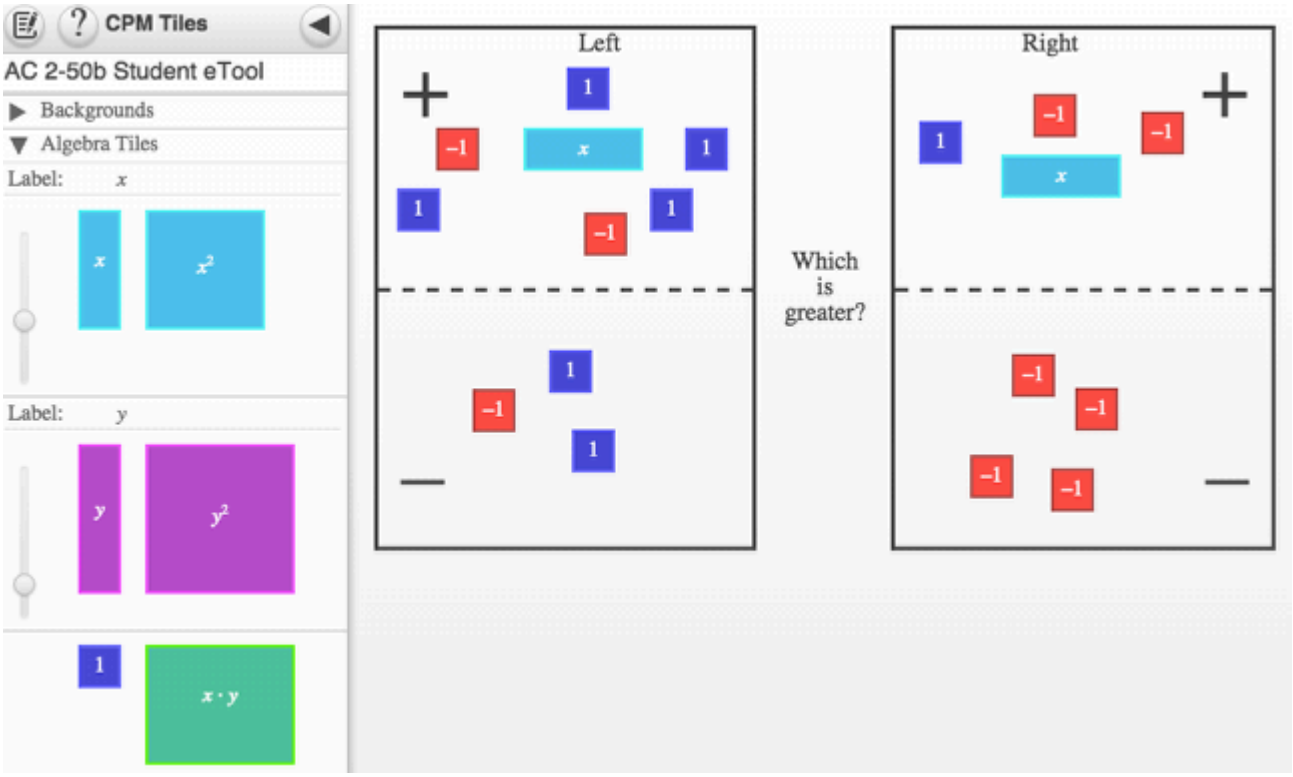
2-48 Tiles:



2-50a Tiles:



2-50b Tiles:

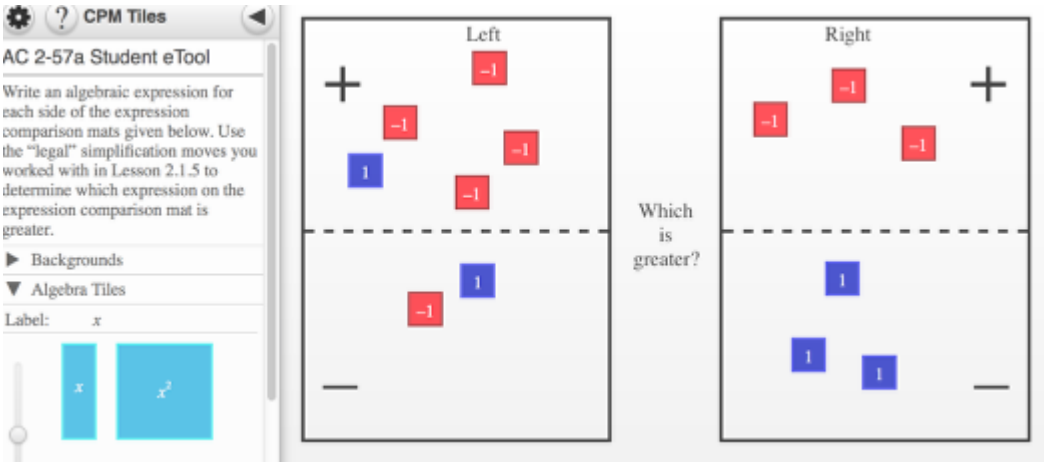

CPM Tiles
AC 2-50b Student eTool
Backgrounds
Algebra Tiles
Label: x
Label: y
Left
Right
Which is greater?

AC 2.1.6: 2-57a-f & 2-58 tiles (CPM)

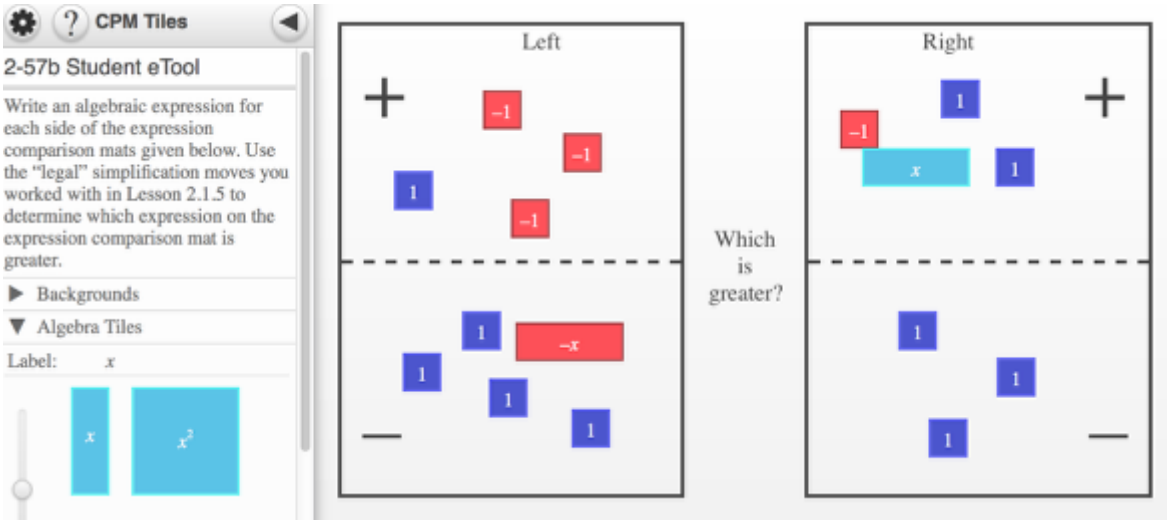
Click on the links below.

2-57a tiles (CPM)
2-57b tiles (CPM)
2-57c tiles (CPM)
2-57d tiles (CPM)
2-57e tiles (CPM)
2-57f tiles (CPM)
2-58 tiles (CPM)

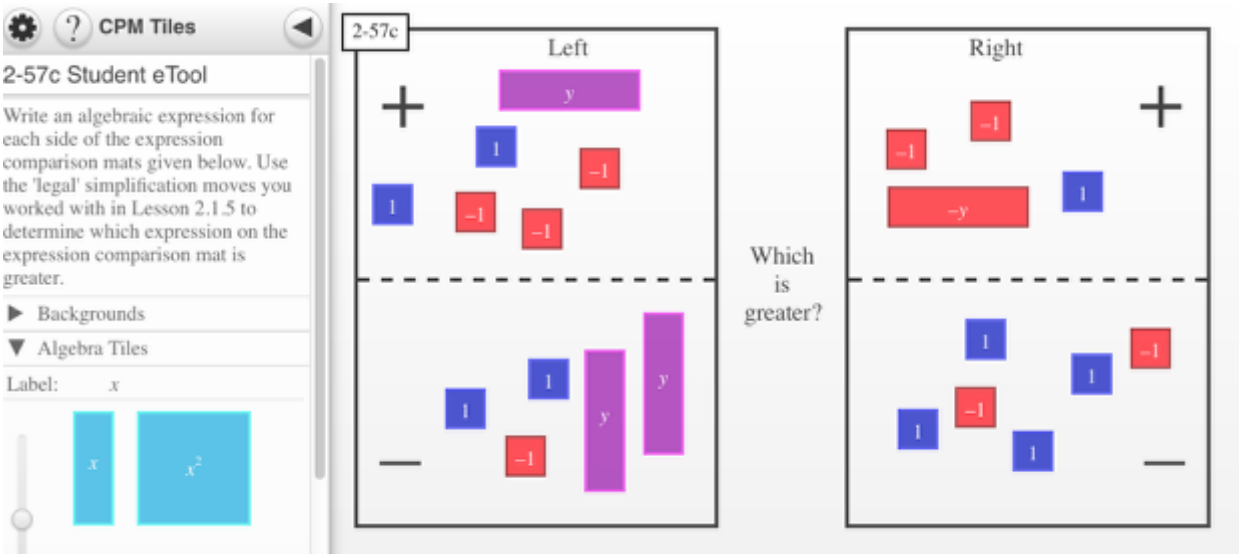
1. AC 2.1.6 2-57a:



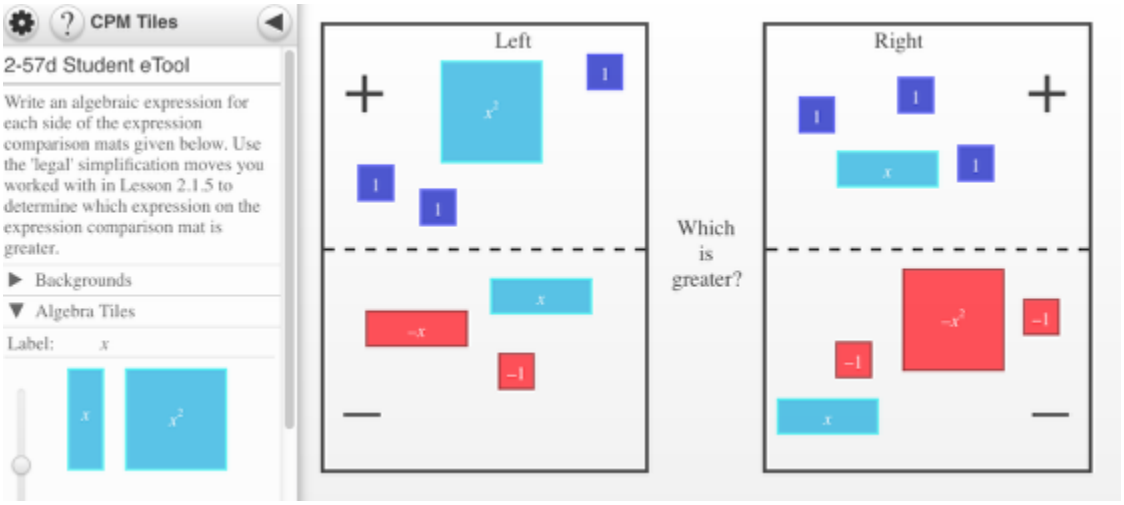
2. AC 2.1.6 2-57b:



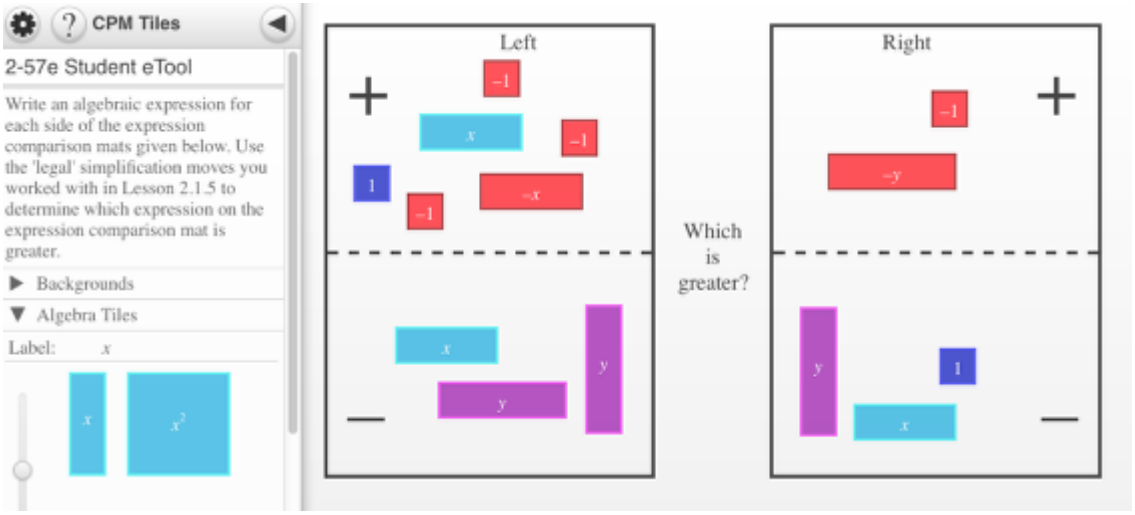
3. AC 2.1.6 2-57c:



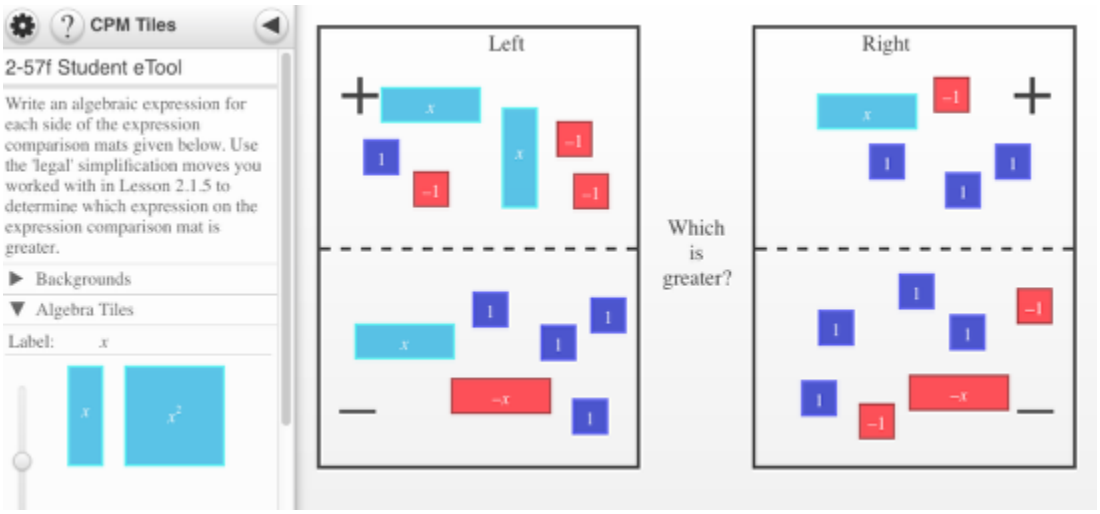
4. AC 2.1.6 2-57d:



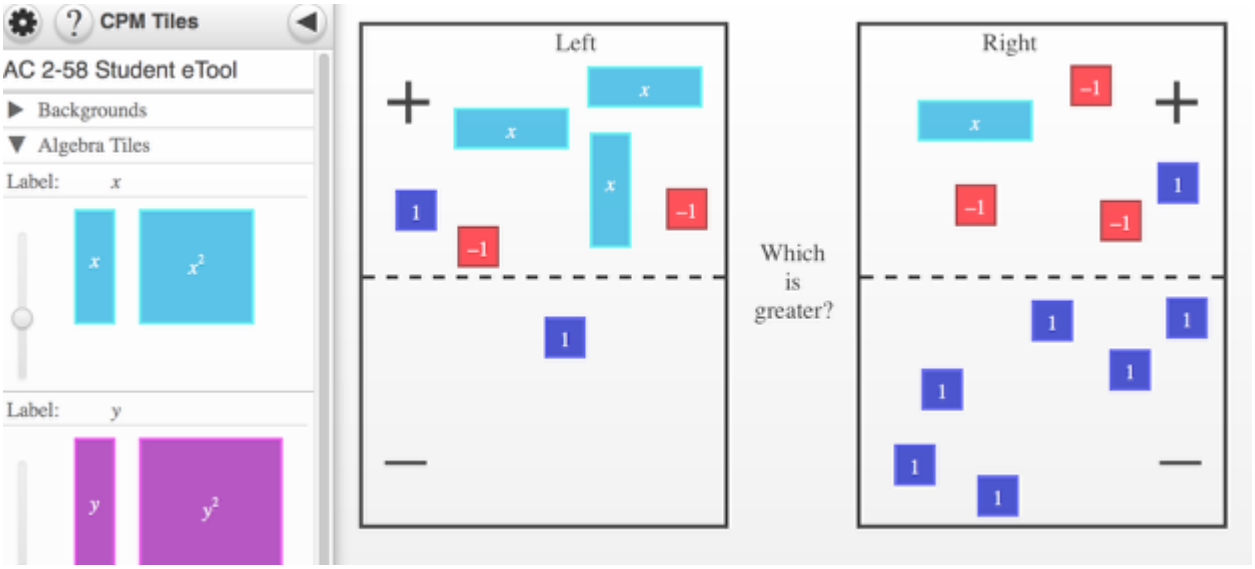
5. AC 2.1.6 2-57e:



6. AC 2.1.6 2-57f:



7. AC 2.1.6 2-58:

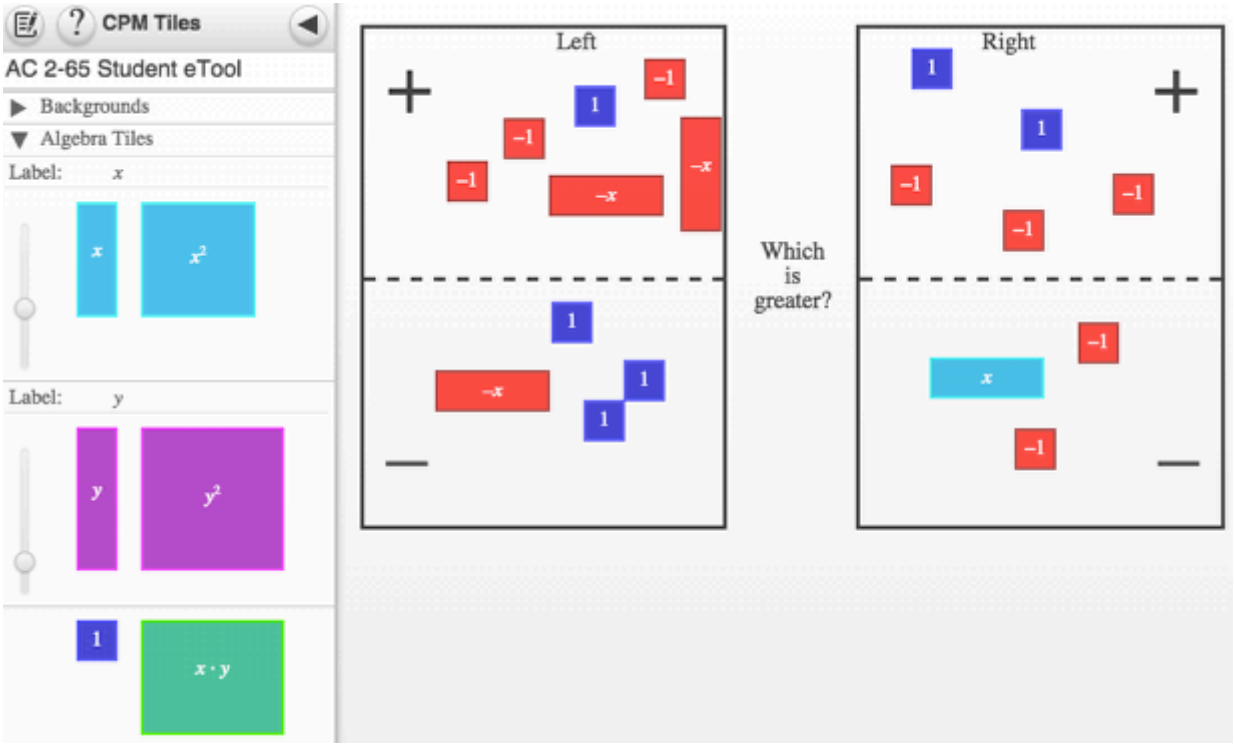

CPM Tiles
AC 2-58 Student eTool
Backgrounds
Algebra Tiles
Label: x
Label: y
Left
Right
Which is greater?

AC 2.1.7: 2-65, 2-66, 2-67a & 2-67b tiles (CPM)

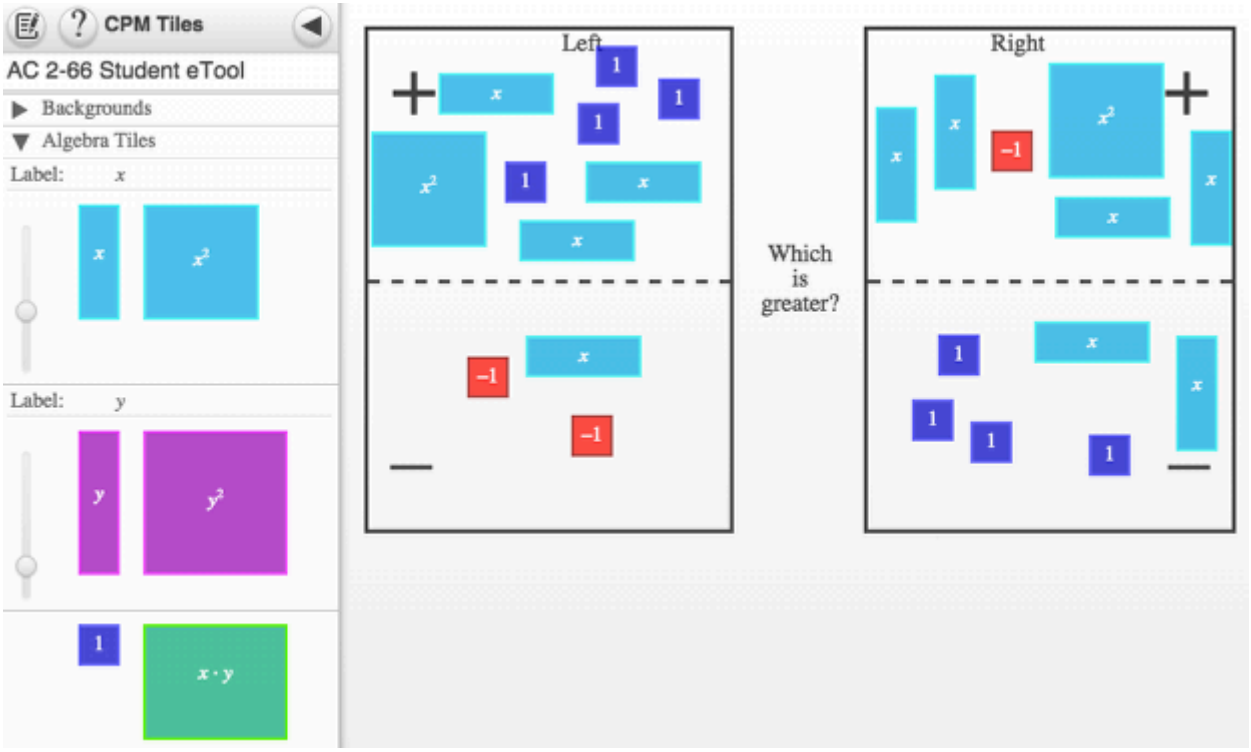
Click on the links below.

2-65 tiles (CPM)
2-66 tiles (CPM)
2-67a tiles (CPM)
2-67b tiles (CPM)

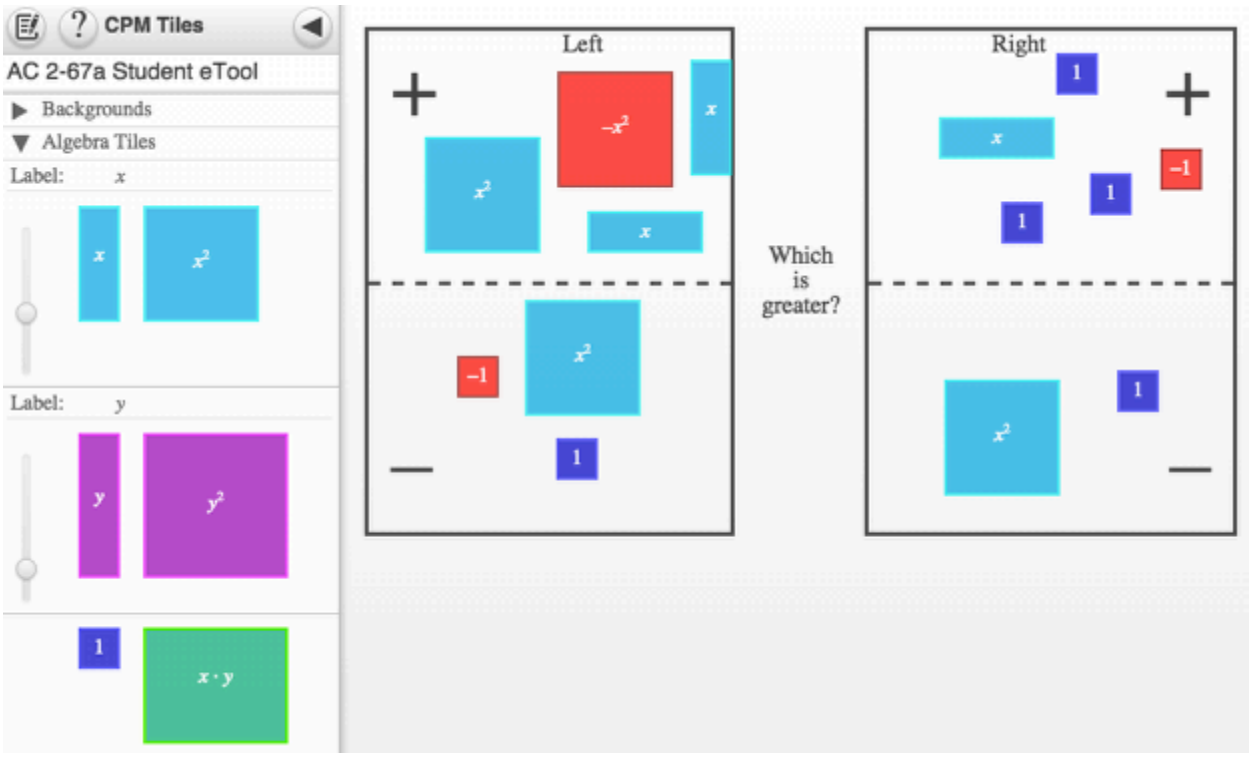
1. AC 2.1.7 2-65:



2. AC 2.1.7 2-66:



3. AC 2.1.7 2-67a:



4. AC 2.1.7 2-67b:

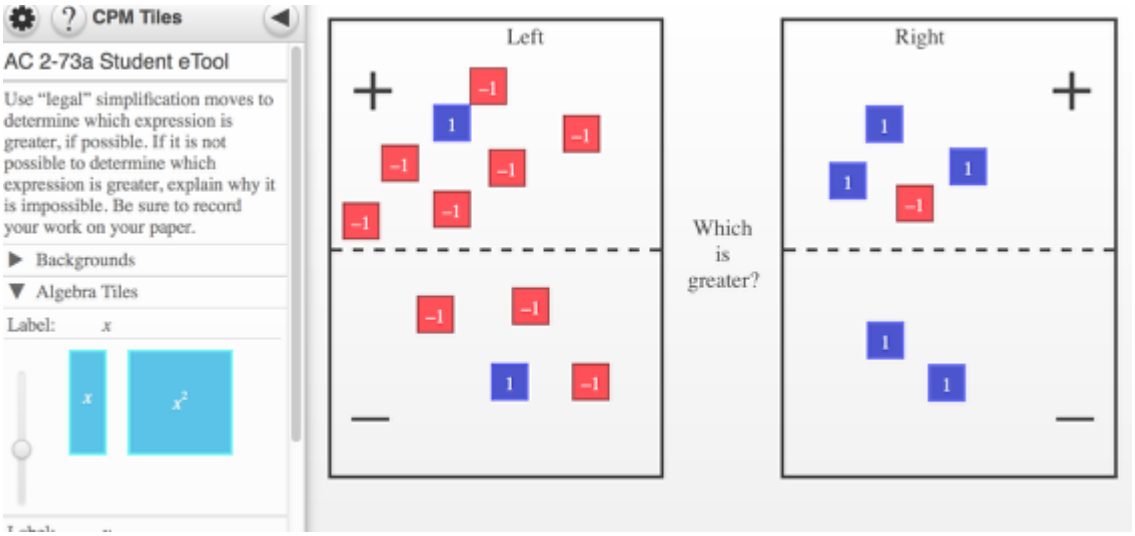

CPM Tiles
AC 2-67b Student eTool
Backgrounds
Algebra Tiles
Label: x
Label: y
Left
Right
Which is greater?

AC 2.1.8: 2-73a & 2-75a tiles (CPM)

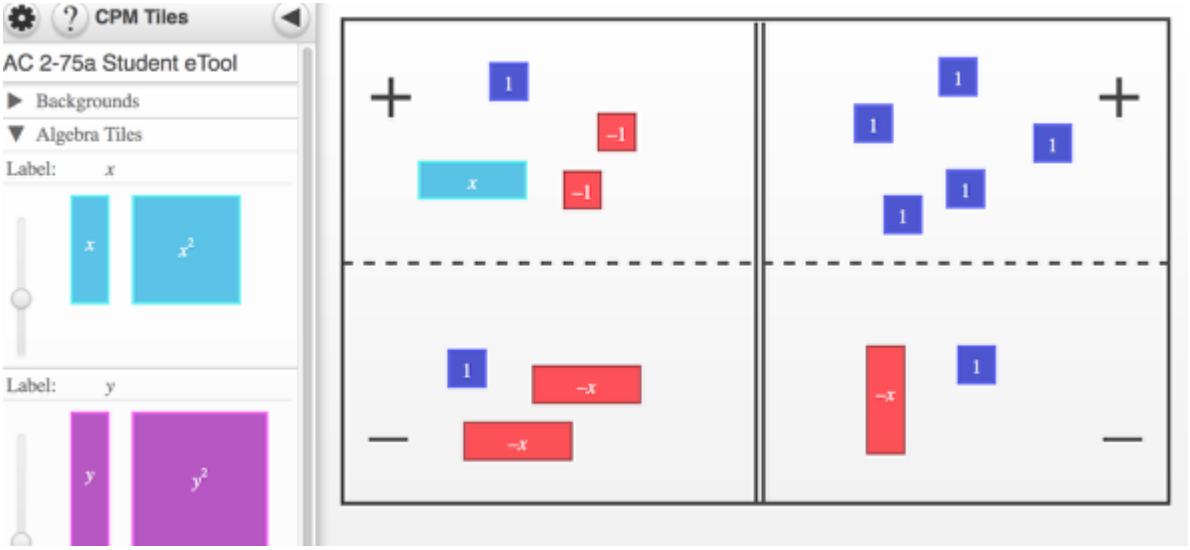
Click on the links below.

2-73a tiles (CPM)
2-75a tiles (CPM)

1. AC 2.1.8 2-73a:



2. AC 2.1.8 2-75a:

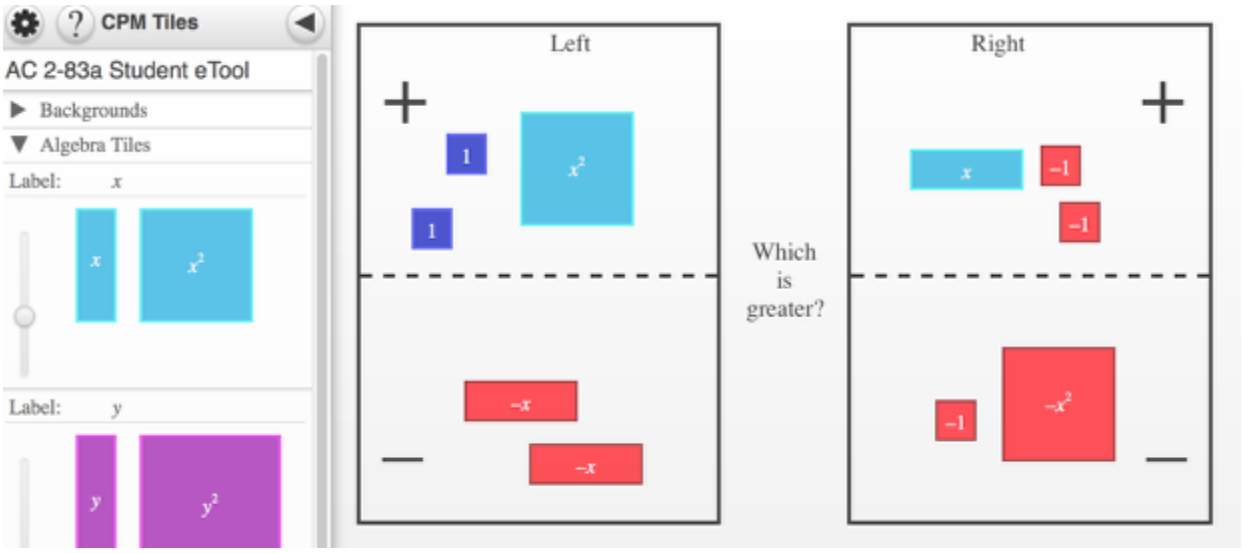


AC 2.1.9: 2-83a-c tiles (CPM)

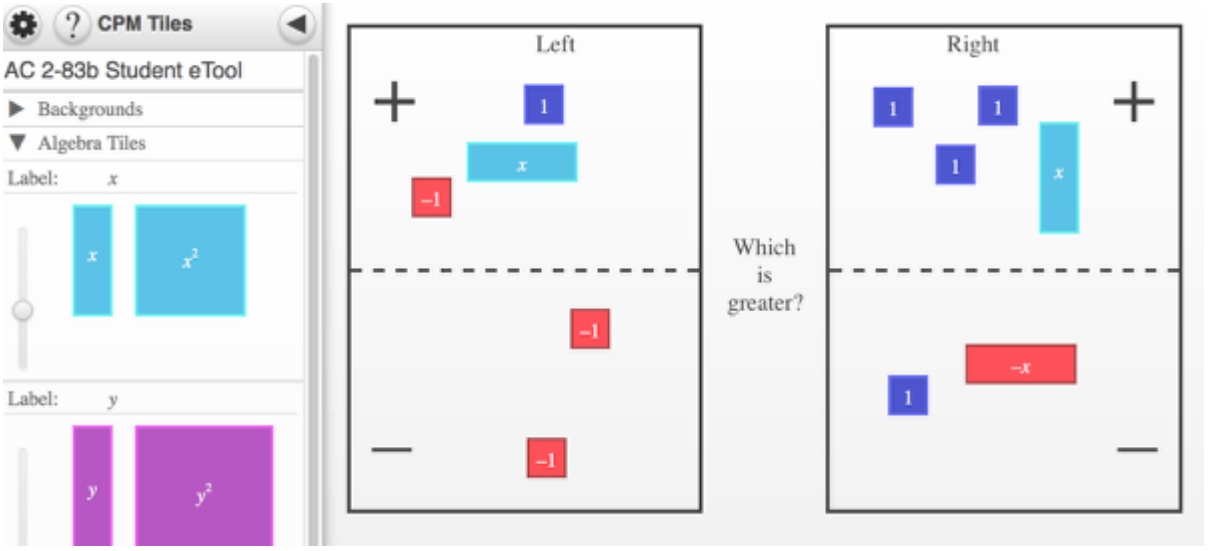
Click on the links below.

2-83a tiles (CPM)
2-83b tiles (CPM)
2-83c tiles (CPM)

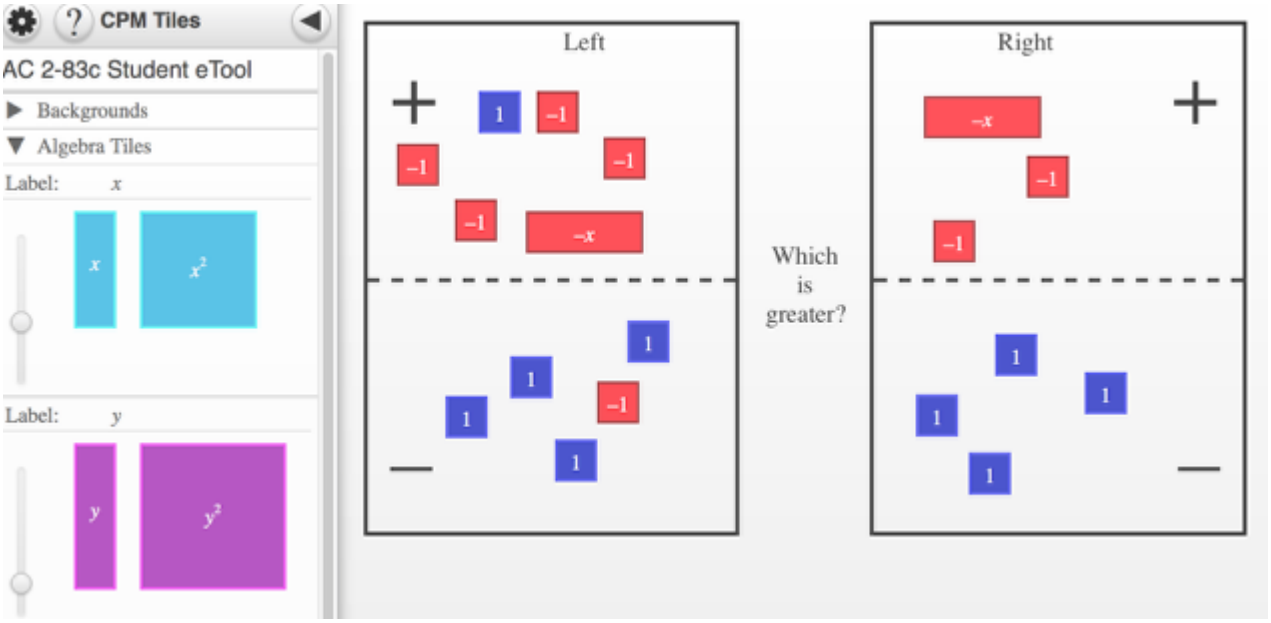
1. AC 2.1.9 2-83a:



2. AC 2.1.9 2-83b:



3. AC 2.1.9 2-83c:


CPM Tiles
AC 2-83c Student eTool
Backgrounds
Algebra Tiles
Label: x
Label: y
Left
Right
Which is greater?

Chapter 3

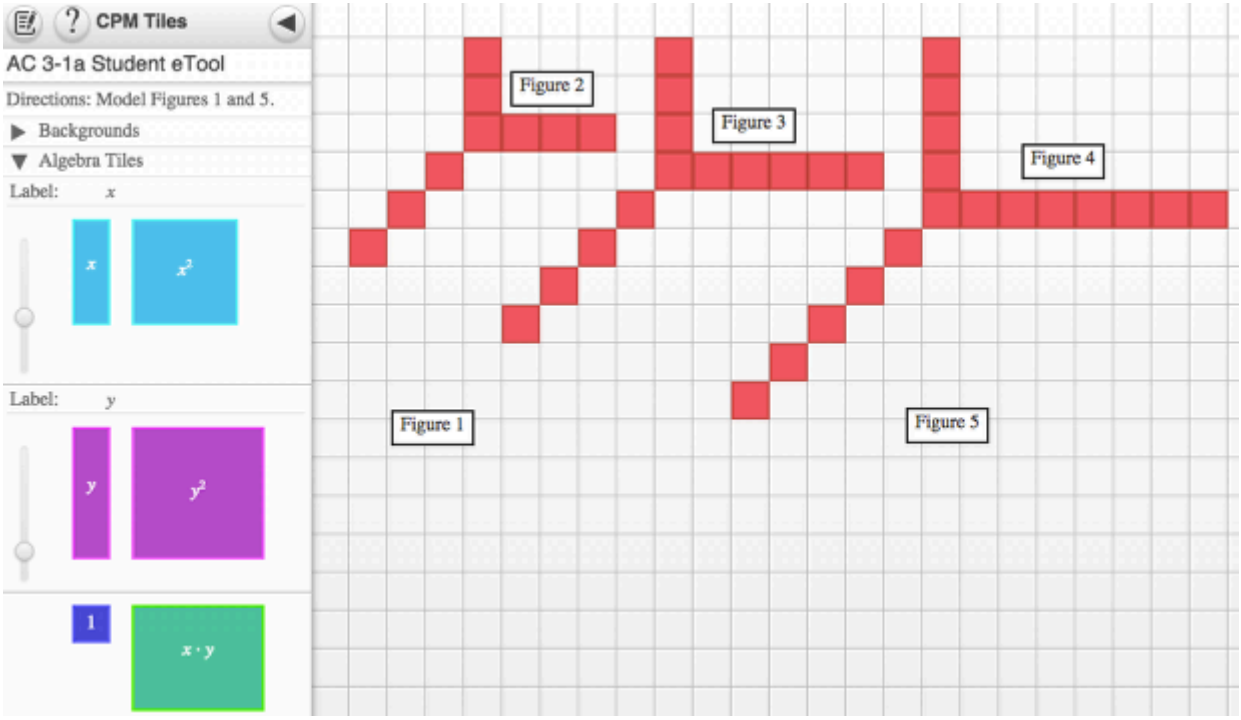
AC 3.1.1: 3-1a & 3-1b Student eTool (CPM)

Click on the links below.

3-1a Student eTool (CPM)
3-1b Student eTool (CPM)

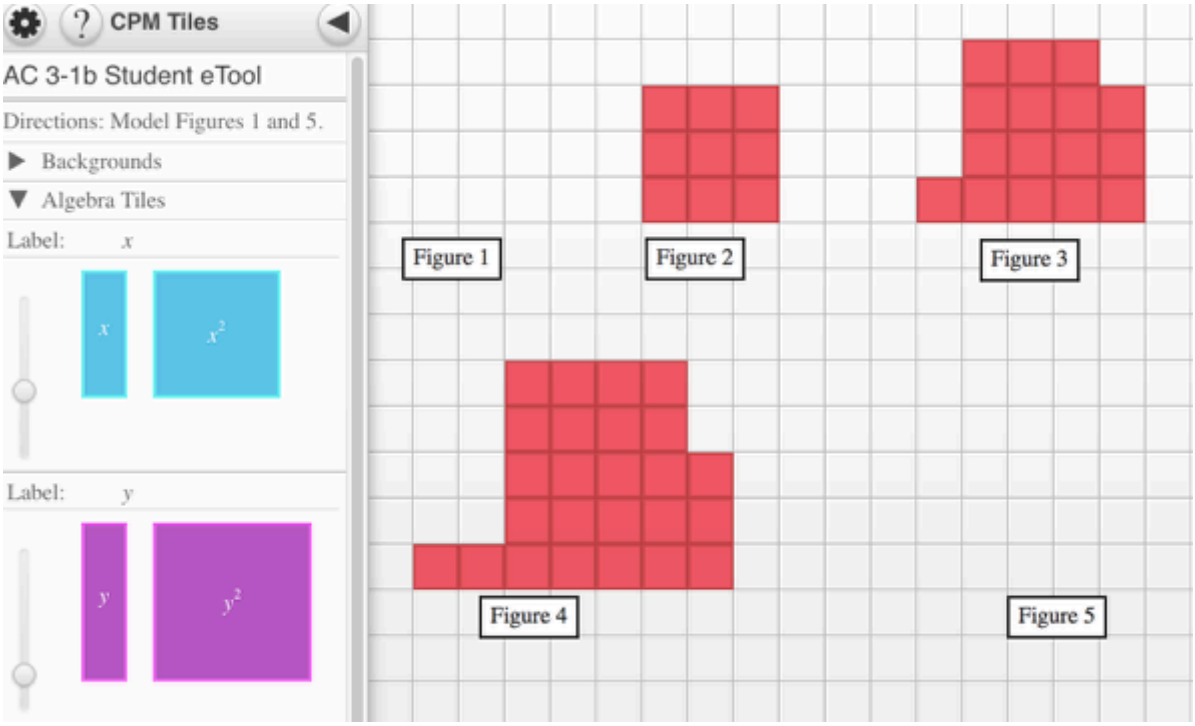
1. AC 3-1a:

Create figures 1 and 5. Move the text boxes to a better location.



2. AC 3-1b:

Create figures 1 and 5. Move the text boxes to a better location.

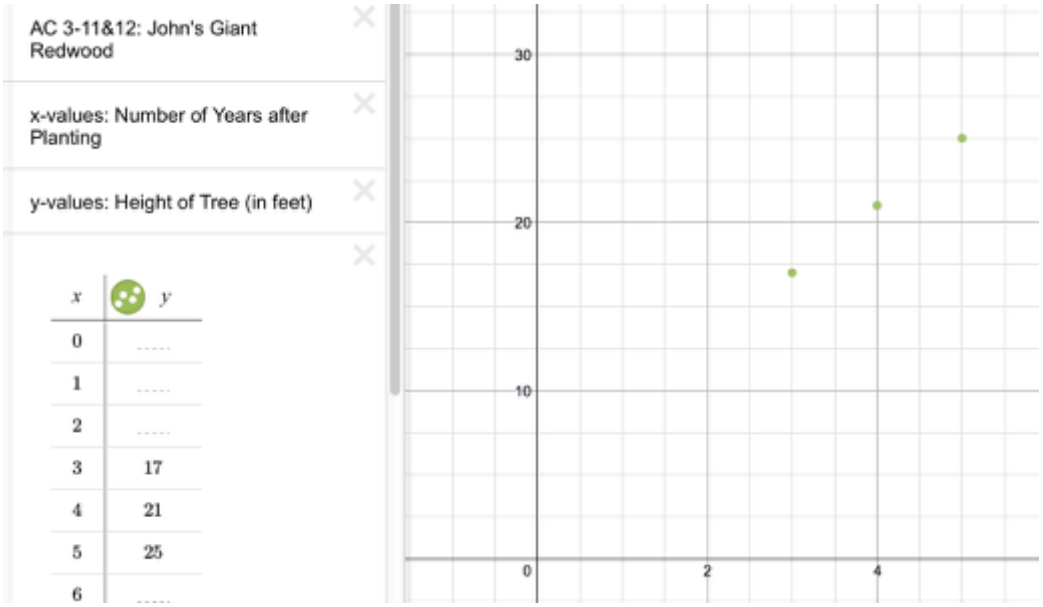

CPM Tiles
AC 3-1b Student eTool
Directions: Model Figures 1 and 5.
Backgrounds
Algebra Tiles
Label: x
Label: y
Figure 1
Figure 2
Figure 3
Figure 4
Figure 5

AC 3.1.2: John's Giant Redwood Student eTool (Desmos)

Click on the link below for the "John's Giant Redwood Student eTool (Desmos)."

John's Giant Redwood Student eTool (Desmos)

1. Complete the table. Then type in the rule that goes through the points.

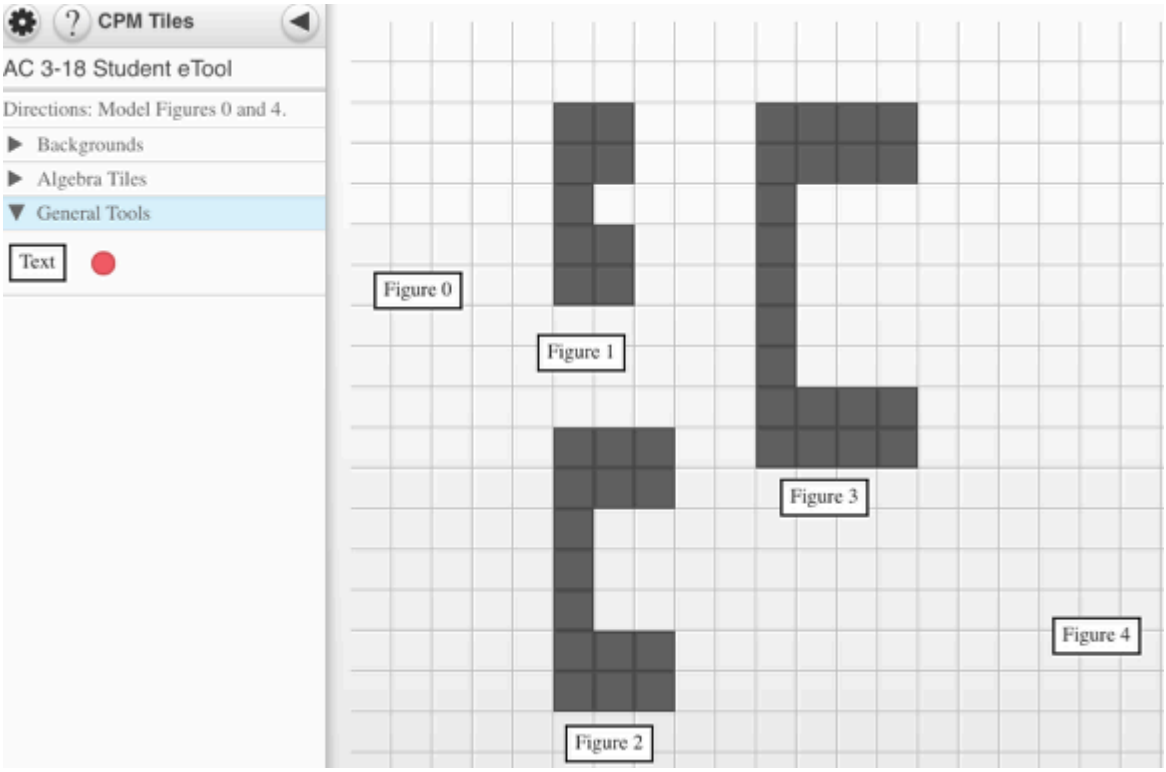


AC 3.1.3: 3-18, 3-19 to 3-22 Student eTool (CPM & Desmos)

Click on the links below.

3-18 Student eTool (CPM)
3-19 to 3-22 Student eTool (Desmos)

1. Drag tiles to create Figure 0 and Figure 4.



2. Complete the table finding a rule that goes through the points.

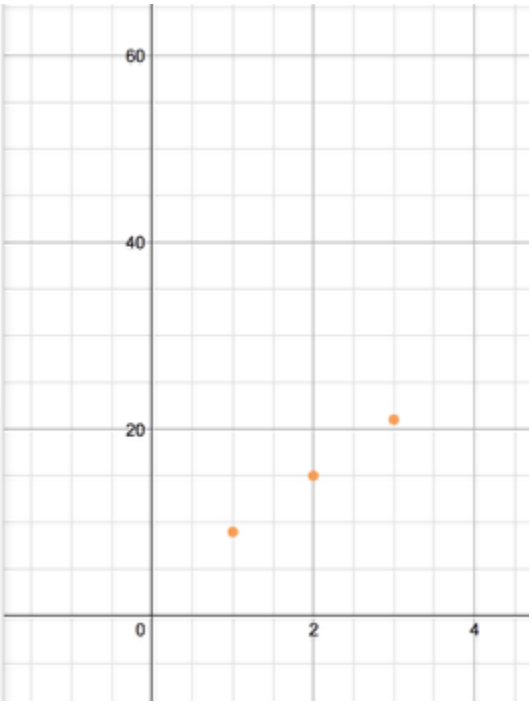
AC 3-19 through 3-22: Big C Graph

Use the table below to input data and graph points.

x-value: figure number

y-value: # of tiles in figure number

x	y
0	-----
1	9
2	15
3	21
4	

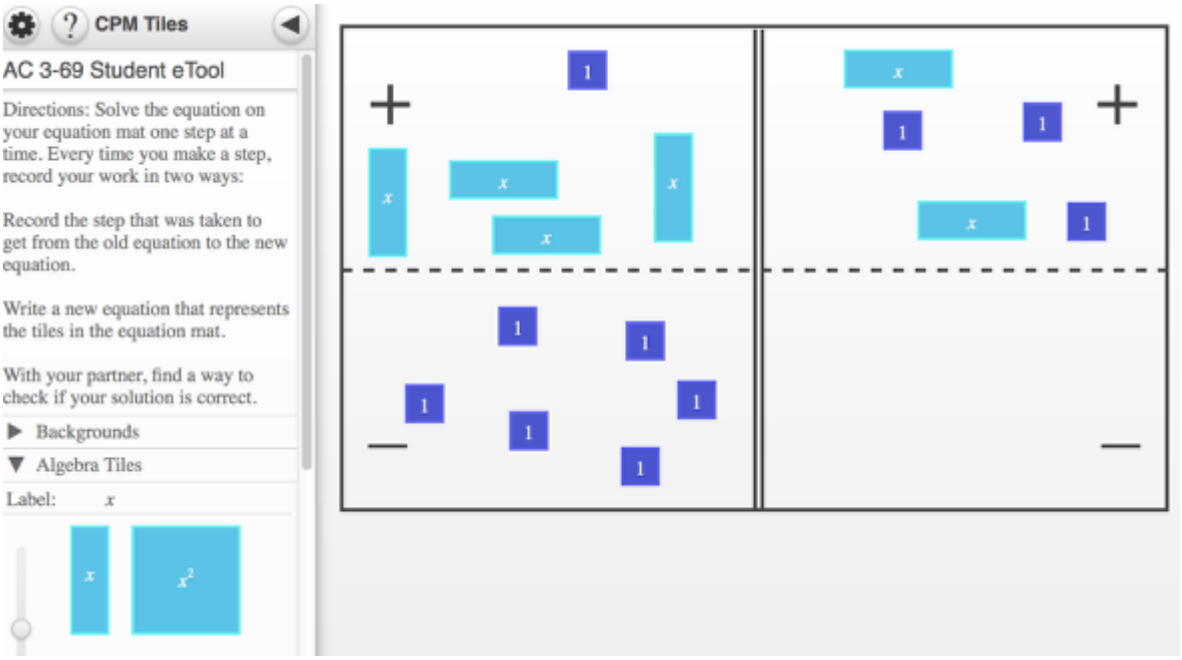


AC 3.2.1: 3-69 Student eTool (CPM)

Click on the link below.

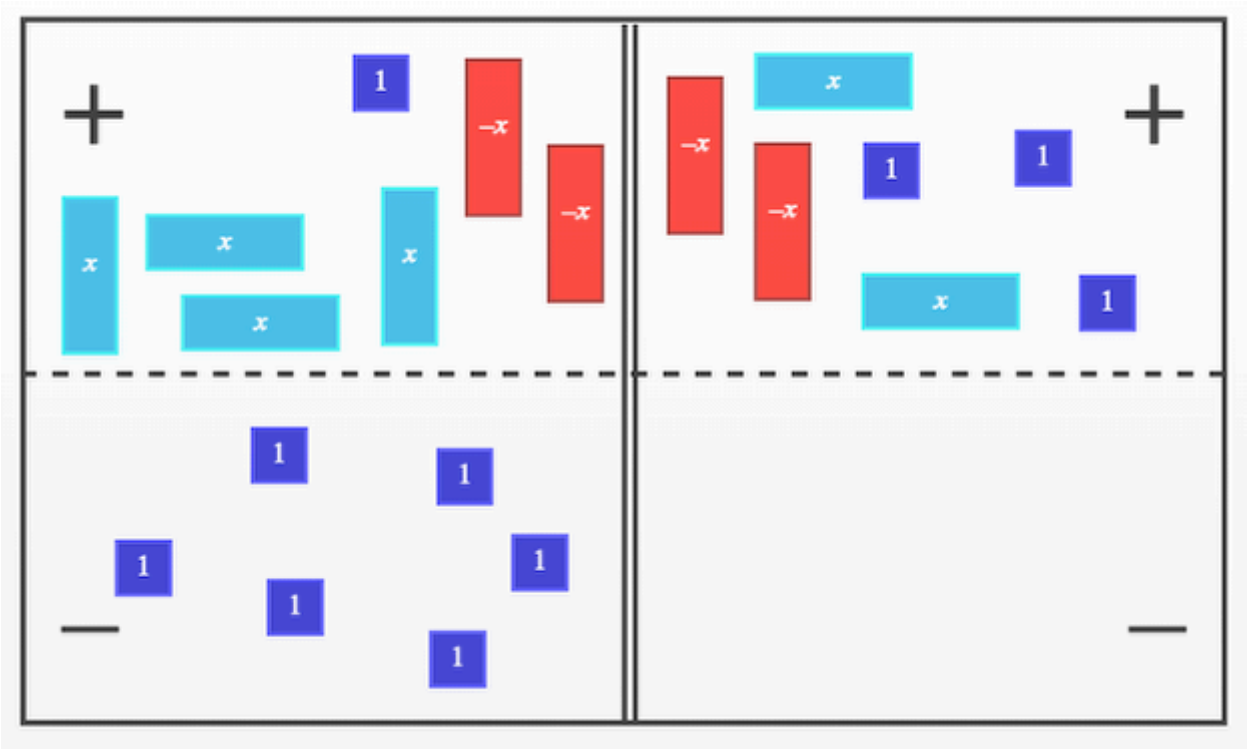
3-69 tiles Student eTool (CPM)

1. AC 3-69 Student eTool:



2. Record each step.

Example below: Add a –2x to both sides.


+
1
−x
−x
x
x
x
x
−x
−x
x
1
1
1
+
1
1
1
1
1
1
—
—

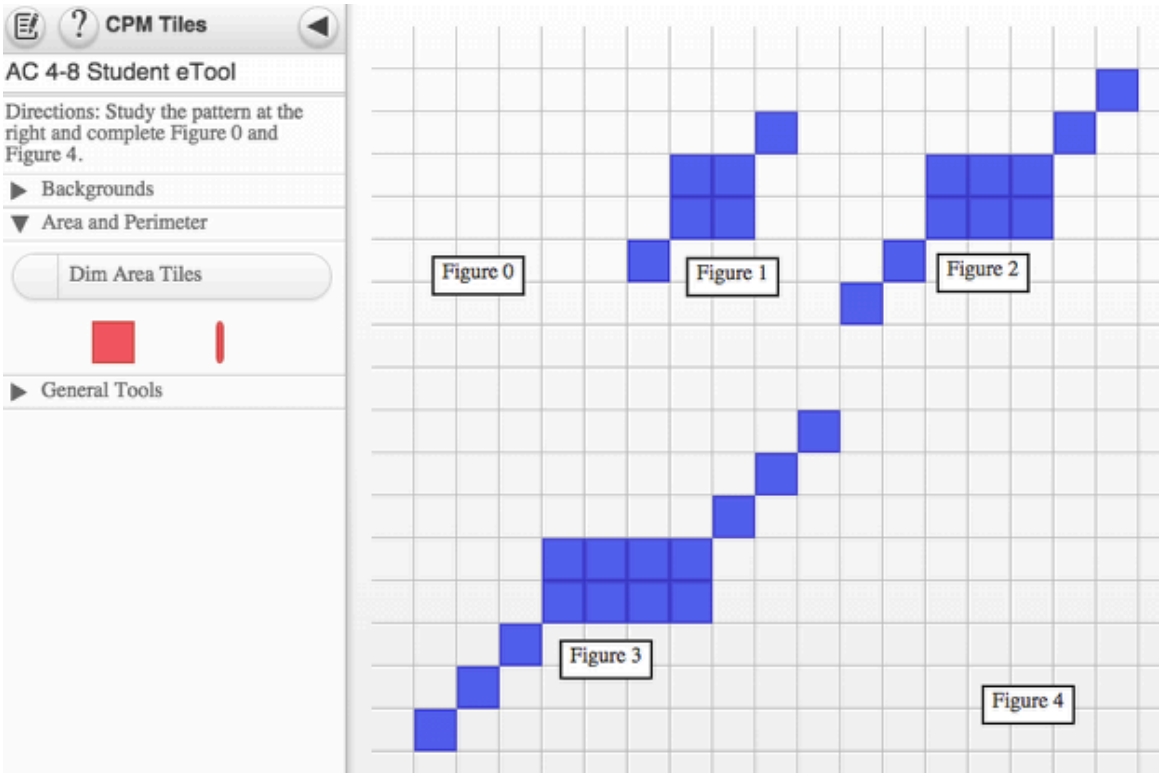
Chapter 4

AC 4.1.2: 4-8, 4-9a&b, 4-11 Student eTool (CPM)

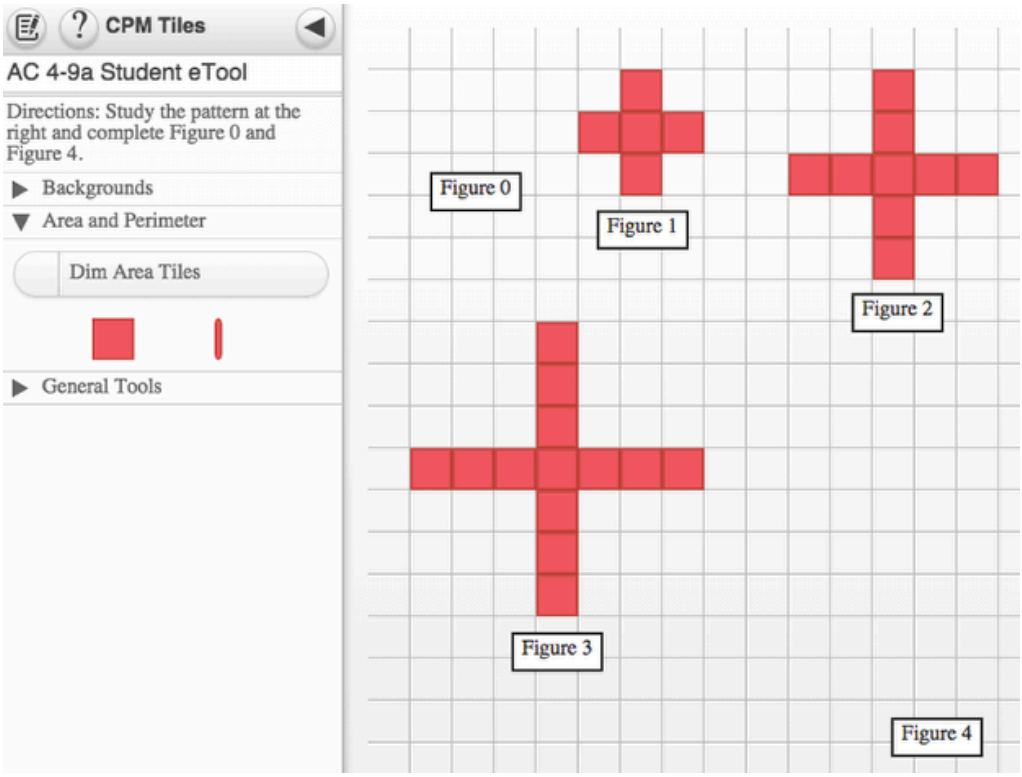
Click on the links below.

[4-8 Student eTool (CPM)]
[4-9a Student eTool (CPM)]
[4-9b Student eTool (CPM)]
[4-11 Student eTool (CPM)]

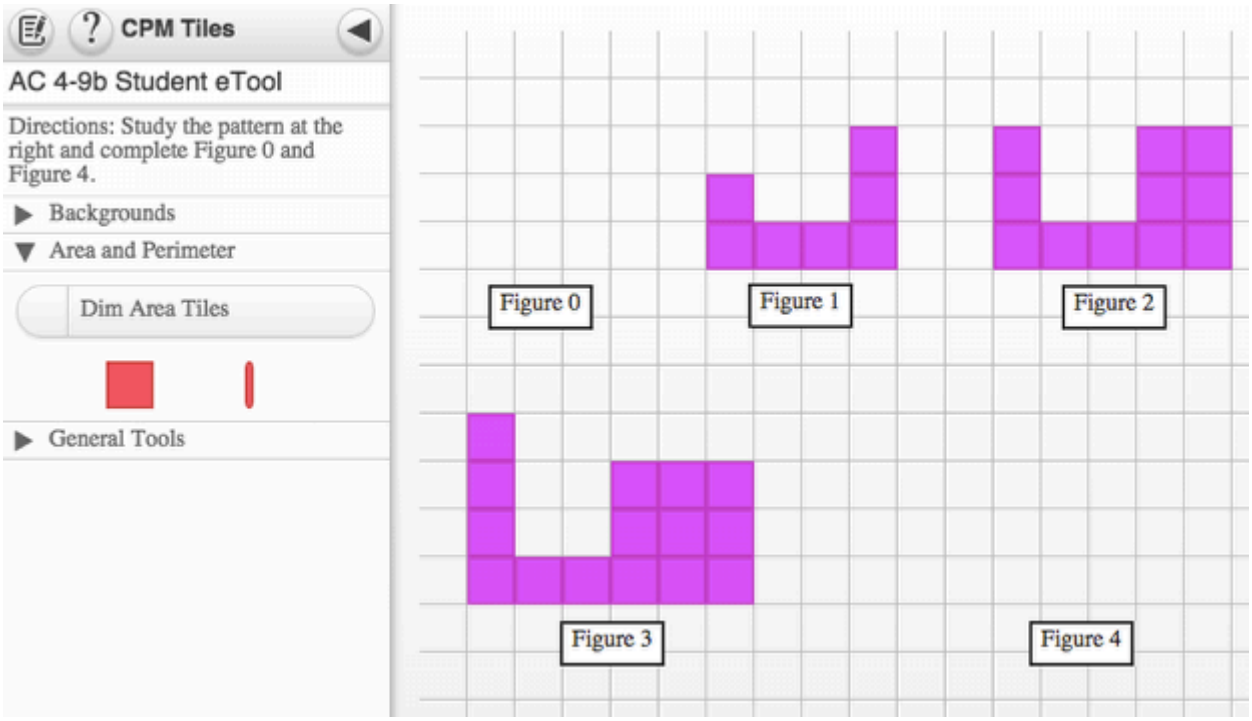
1. AC 4-8 Student eTool:



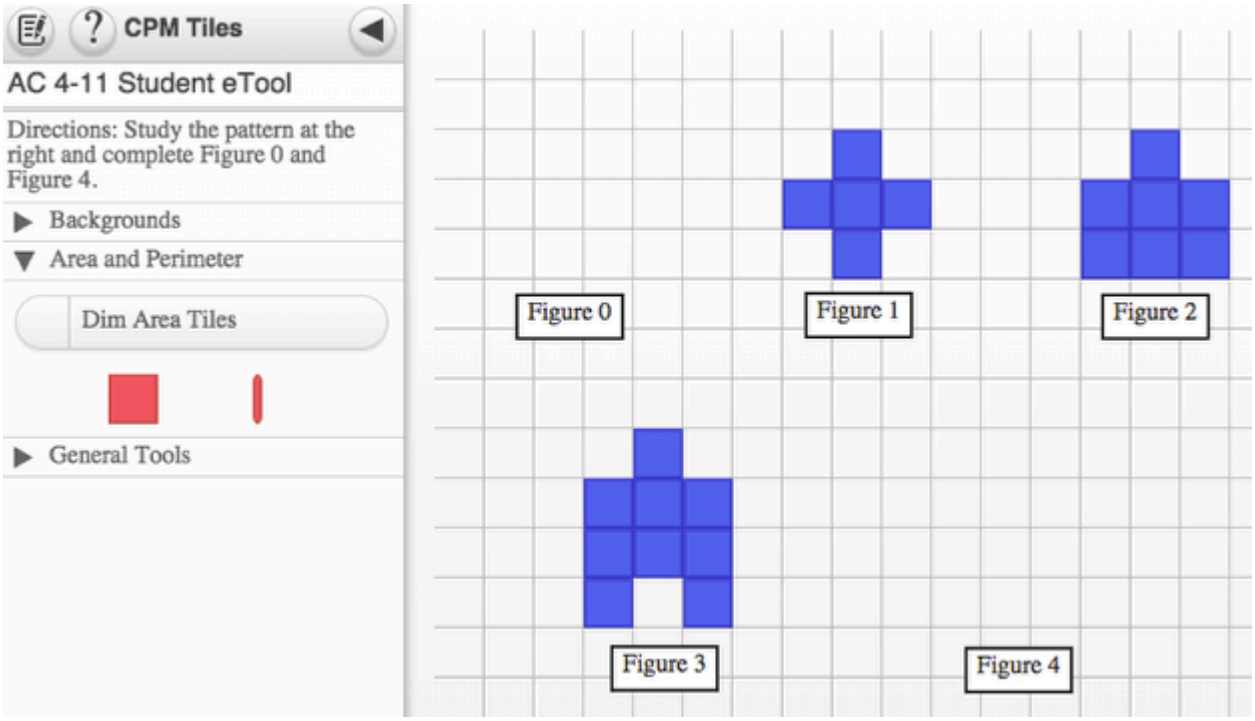
2. AC 4-9a Student eTool:



3. AC 4-9b Student eTool:



4. AC 4-11 Student eTool:

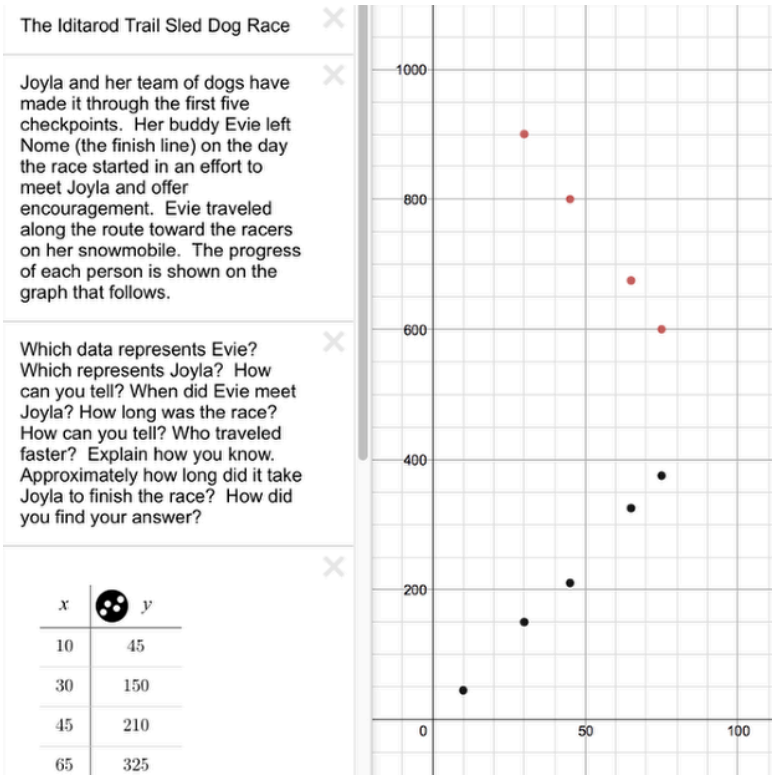


AC 4.2.1: AC-67 Student eTool (Desmos) & Iditarod - Checkpoints Video

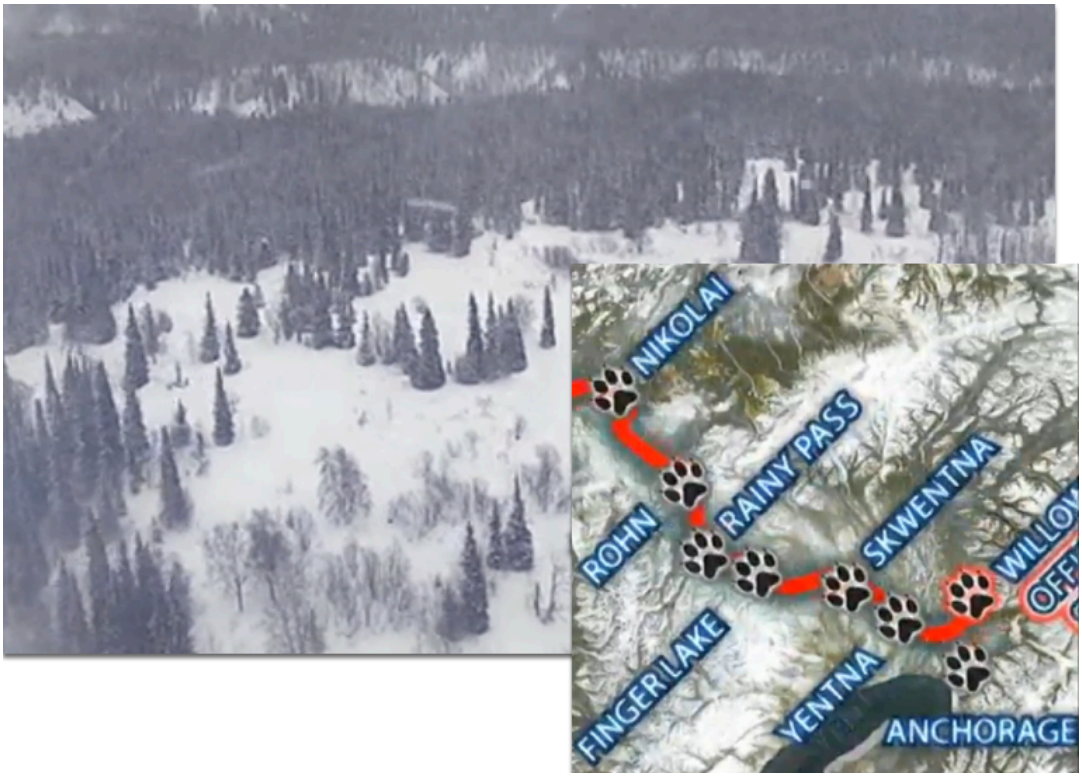
Click on the links below.

AC 4-67 Student eTool (Desmos)

1. AC 4-67 Student eTool (Desmos)



2. Iditarod - Checkpoints



AC 4.2.3: 4-86 Student eTool (CPM)

Click on the link below.

AC 4-86 Student eTool (CPM)

AC 4-86 Student eTool: