CC Course 3 eTools
<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>General eTools</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Algebra Tiles (CPM)</td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>Pattern Tile &amp; Dot Tool (CPM)</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Base Ten Blocks (CPM)</td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>Area and Perimeter (CPM)</td>
<td></td>
<td>14</td>
</tr>
<tr>
<td>Desmos Graphing Calculator</td>
<td></td>
<td>17</td>
</tr>
<tr>
<td>Data Representations (CPM)</td>
<td></td>
<td>20</td>
</tr>
<tr>
<td>Rigid Transformations eTool (CPM)</td>
<td></td>
<td>22</td>
</tr>
<tr>
<td>Chapter 1</td>
<td></td>
<td>25</td>
</tr>
<tr>
<td>CC3 1.1.2: 1-9 Student eTool (CPM)</td>
<td></td>
<td>27</td>
</tr>
<tr>
<td>CC3 1.1.2: 1-10 Student eTool (CPM)</td>
<td></td>
<td>28</td>
</tr>
<tr>
<td>CC3 1.1.4: 1-25b Newton's Revenge Teacher eTool (Desmos)</td>
<td></td>
<td>29</td>
</tr>
<tr>
<td>CC3 1.2.1: 1-42 Student eTool (Desmos)</td>
<td></td>
<td>30</td>
</tr>
<tr>
<td>Chapter 2</td>
<td></td>
<td>31</td>
</tr>
<tr>
<td>CC3 2.1.4: 2-36 Student eTool (CPM)</td>
<td></td>
<td>33</td>
</tr>
<tr>
<td>CC3 2.1.5: 2-47 Student eTool (CPM)</td>
<td></td>
<td>34</td>
</tr>
<tr>
<td>CC3 2.1.5: 2-49a and 2-49b Student eTools (CPM)</td>
<td></td>
<td>35</td>
</tr>
<tr>
<td>CC3 2.1.6: 2-56a to 2-56f Student eTools (CPM)</td>
<td></td>
<td>37</td>
</tr>
<tr>
<td>CC3 2.1.6: 2-57 Student eTool (CPM)</td>
<td></td>
<td>41</td>
</tr>
<tr>
<td>CC3 2.1.7: 2-64, 2-65, 2-66a &amp; 2-66b Student eTools (CPM)</td>
<td></td>
<td>42</td>
</tr>
<tr>
<td>CC3 2.1.8: 2-72 &amp; 2-74 Student eTools (CPM)</td>
<td></td>
<td>45</td>
</tr>
<tr>
<td>CC3 2.1.9: 2-82a, 2-82b, &amp; 2-82c Student eTools (CPM)</td>
<td></td>
<td>47</td>
</tr>
<tr>
<td>Chapter 3</td>
<td></td>
<td>49</td>
</tr>
<tr>
<td>CC3 3.1.1: 3-1a &amp; 3-1b Student eTool (CPM)</td>
<td></td>
<td>51</td>
</tr>
<tr>
<td>CC3 3.1.2: Redwoods: The Tallest Trees Video</td>
<td></td>
<td>53</td>
</tr>
<tr>
<td>CC3 3.1.2: 3-11&amp;12 John's Giant Redwood Student eTool (Desmos)</td>
<td></td>
<td>54</td>
</tr>
<tr>
<td>CC3 3.1.3: 3-18 Student eTool (Desmos)</td>
<td></td>
<td>55</td>
</tr>
<tr>
<td>CC3 3.1.3: 3-19 to 3-22 Student eTool (Desmos)</td>
<td></td>
<td>56</td>
</tr>
<tr>
<td>CC3 3.2.1: 3-70 Student eTool (CPM)</td>
<td></td>
<td>58</td>
</tr>
<tr>
<td>Chapter 4</td>
<td></td>
<td>59</td>
</tr>
<tr>
<td>Chapter 3</td>
<td>Section</td>
<td>Topic</td>
</tr>
<tr>
<td>-----------</td>
<td>---------</td>
<td>-------</td>
</tr>
<tr>
<td></td>
<td>CC3 4.1.2</td>
<td>4-12, 4-13a, 4-13b, and 4-15 Student eTools (CPM)</td>
</tr>
<tr>
<td></td>
<td>CC3 4.1.3</td>
<td>4-22 Student eTool (Desmos)</td>
</tr>
<tr>
<td></td>
<td>CC3 4.1.7</td>
<td>4-65 Student eTool (Desmos)</td>
</tr>
</tbody>
</table>

Chapter 5

<table>
<thead>
<tr>
<th>Section</th>
<th>Topic</th>
<th>Excel Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>CC3 5.1.1</td>
<td>5-2b Student eTool (CPM)</td>
<td>70</td>
</tr>
<tr>
<td>CC3 5.2.1</td>
<td>Iditarod- Checkpoints Video</td>
<td>71</td>
</tr>
<tr>
<td>CC3 5.2.1</td>
<td>5-23 Student eTool (Desmos)</td>
<td>74</td>
</tr>
<tr>
<td>CC3 5.2.3</td>
<td>5-42 Student eTool (CPM)</td>
<td>75</td>
</tr>
</tbody>
</table>

Chapter 6

<table>
<thead>
<tr>
<th>Section</th>
<th>Topic</th>
<th>Excel Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>CC3 6.1.1</td>
<td>Key-Lock Puzzle (CPM)</td>
<td>78</td>
</tr>
<tr>
<td>CC3 6.1.2</td>
<td>Transformation Challenge 1 &amp; 2 (CPM)</td>
<td>82</td>
</tr>
<tr>
<td>CC3 6.1.3</td>
<td>6-18 Student eTool (Desmos)</td>
<td>84</td>
</tr>
<tr>
<td>CC3 6.1.3</td>
<td>6-24 Student eTool (CPM)</td>
<td>85</td>
</tr>
<tr>
<td>CC3 6.2.1</td>
<td>6-43 Student eTool (Desmos)</td>
<td>87</td>
</tr>
<tr>
<td>CC3 6.2.2</td>
<td>6-52, 6-53, &amp; 6-56 Student eTools (Desmos)</td>
<td>89</td>
</tr>
</tbody>
</table>

Chapter 7

<table>
<thead>
<tr>
<th>Section</th>
<th>Topic</th>
<th>Excel Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>CC3 7.1.2</td>
<td>7-15 Student eTool (Desmos)</td>
<td>94</td>
</tr>
<tr>
<td>CC3 7.2.2</td>
<td>7-43 Student eTool (Desmos)</td>
<td>96</td>
</tr>
<tr>
<td>CC3 7.2.3</td>
<td>7-56 &amp; 7-59 Student eTools (Desmos)</td>
<td>97</td>
</tr>
<tr>
<td>CC3 7.3.1</td>
<td>7-87 Student eTool (Desmos)</td>
<td>99</td>
</tr>
<tr>
<td>CC3 7.3.2</td>
<td>7-97 Student eTool (Desmos)</td>
<td>102</td>
</tr>
</tbody>
</table>

Chapter 8

<table>
<thead>
<tr>
<th>Section</th>
<th>Topic</th>
<th>Excel Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>CC3 8.1.1</td>
<td>8-2 and 8-3 Student eTools (Desmos)</td>
<td>105</td>
</tr>
<tr>
<td>CC3 8.1.2</td>
<td>8-14 Student eTool (Desmos)</td>
<td>107</td>
</tr>
<tr>
<td>CC3 8.2.3</td>
<td>Powers of Ten Film</td>
<td>108</td>
</tr>
</tbody>
</table>

Chapter 9

<table>
<thead>
<tr>
<th>Section</th>
<th>Topic</th>
<th>Excel Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>CC3 9.2.3</td>
<td>9-85 Student eTool (Desmos)</td>
<td>112</td>
</tr>
<tr>
<td>CC3 9.2.4</td>
<td>9-105 ShowMe video</td>
<td>113</td>
</tr>
<tr>
<td>CC3 9.2.6</td>
<td>3D Model Box (CPM)</td>
<td>115</td>
</tr>
<tr>
<td>CC3 9.2.7</td>
<td>Pythagorean Proof Video</td>
<td>117</td>
</tr>
</tbody>
</table>

Chapter 10

<table>
<thead>
<tr>
<th>Section</th>
<th>Topic</th>
<th>Excel Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>120</td>
</tr>
</tbody>
</table>
General eTools
This tutorial describes how to use the Algebra Tiles including additional features.

Click on the link below to access eTool.

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.
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.
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.
Base Ten Blocks (CPM)

Use this tool for percents and counting out of one hundred.

Click on the link below to access the eTool.

Base Ten Blocks (CPM)

1. Drag Base Ten Blocks from the tray to the display area.

• Unit Tile
• Ten Tile
• Hundred Tile

Notes: Tiles can be overlapped.
Tiles will snap to the grid.
2. Double click to rotate.

3. Add text.

   1. Click the arrow before the 'General Tools' to view.
   2. Click the Text Box and drag it to the display area.
   3. Click the 'T_' icon to add/remove text border.
      
      Note: If the Text Box settings do not display automatically, right click on the Text box.
   4. Choose the font color you want to use.
   5. Double click the Text Box to rotate.
Area and Perimeter (CPM)

Click on the link below to access the eTool.

1. Drag the tiles and toothpicks to the display area. Double click toothpicks to rotate.

2. Toothpicks Settings
   1. Click the toothpick and hold to view the toothpick settings.
   2. Click one of the arrows at the end of toothpick to adjust the length.
   3. Select the tip you want to use.
   4. Click the "Change color" button to change the color of the toothpick.
   5. Double click the toothpick to rotate.
   6. Click and drag to move the toothpick.
3. Dim Area showing the perimeter more sharply.

4. Explore the Options Menu:
   1. Click the Paper & Pen Icon and select 'Options'.
   2. Add a title.
   3. Add description.
4. Click the button on the left of each tool name to enable/disable.
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
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.

![Data Representations](image)

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.
Rigid Transformations eTool (CPM)

This eTool will record the steps you create showing translation, rotation, and reflection.

Click on the first link for the eTool. Click on the video links to view the use of the eTool.

- Twelve games using the key lock are also available.
- This tool is designed so that teachers/students can create many more games.

Rigid Transformations
Using RT Tool
Creating an RT Puzzle

1. Steps are shown in the Tray at the left while the action occurs in the Display Area at the right.
2. When playing, active steps are highlighted.

3. In the gear menu, you can create puzzles, clear, or save your projects.
4. Check the "?" for more help or watch the videos above.
Chapter 1
CC3 1.1.2: 1-9 Student eTool (CPM)

Click on the link below to access eTool.

1-9 Student eTool (CPM)

Use this eTool to build Figures 1, 5, and 6.

1. Drag the Area Tile from the tray to the grid.
2. Change the style and color of the Area Tile (optional).
   a. Right click on the tile.
   b. Select the tile.
   c. Click 'Change color' and select the desired color.
Click on the link below to access eTool.

**1-10 Student eTool (CPM)**

Use this eTool to build Figure 1, Figure 5, and Figure 6.

1. Drag the Area Tile from the tray to the grid.
2. Change the style and color of the Area Tile (optional).
   
   a. Right click on the tile.
   
   b. Select the tile.
   
   c. Click 'Change color' and select the desired color.
CC3 1.1.4: 1-25b Newton's Revenge Teacher eTool (Desmos)

Click on the link below to access eTool.

CC3 1-25b Newton's Revenge Teacher eTool (Desmos)

1. Add data to the table.

2. Drag the moveable line to show a trend in the data.
CC3 1.2.1: 1-42 Student eTool (Desmos)

Click on the link below to access eTool.

1-42 Student eTool (Desmos)

1. Click the white circle and arrow at left, below part (b) to view Doug's Table.

2. Add data to the table.

3. Click the white circle at left, below part (c) to view Johnny's Graph.
Chapter 2
CC3 2.1.4: 2-36 Student eTool (CPM)

Click on the link below to access eTool

2-36 Student eTool (CPM)

Use this eTool to build Expression Mat.
CC3 2.1.5: 2-47 Student eTool (CPM)

Click on the link below to access eTool.

2-47 Student eTool (CPM)

Use this eTool to compare the two Expression Mats and see which is greater.
CC3 2.1.5: 2-49a and 2-49b Student eTools (CPM)

Click on the links below to access eTools.

2-49a Student eTool (CPM)
2-49b Student eTool (CPM)

Determine which side of each Expression Comparison Mats is greater.

2-49a:

2-49b:
CC3 2-49b Student eTool

Problem: Use Karl's "legal" simplification moves to determine which side of each expression comparison mat below is greater.

After each expression is simplified, state which side is greater (has the largest value).

Backgrounds

Algebra Tiles

Label: x

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Privacy Policy

Left

Right

Which is greater?
CC3 2.1.6: 2-56a to 2-56f Student eTools (CPM)

Click on the links below to access the eTools.

2-56a Student eTool (CPM)
2-56b Student eTool (CPM)
2-56c Student eTool (CPM)
2-56d Student eTool (CPM)
2-56e Student eTool (CPM)
2-56f Student eTool (CPM)

Use these eTools to compare the two Expression Mats and see which is greater.

1. 2-56a:
2. 2-56b:

3. 2-56c:
4. 2-56d:

5. 2-56e:
6. 2-56f:

2-56. Write an algebraic expression for each side of the Expression Comparison Mat given below. Use the “legal” simplification moves you worked with in Lesson 2.1.3 to determine which expression on the Expression Comparison Mat is greater.

**Left**

- $x$
- $1$
- $-1$
- $x$
- $1$
- $1$
- $-x$
- $1$

**Right**

- $x$
- $1$
- $-1$
- $1$
- $1$
- $1$
- $1$
- $1$

Which is greater?
CC3 2.1.6: 2-57 Student eTool (CPM)

Click on the link below to access eTool.

2-57 Student eTool (CPM)

Use this eTool to compare the two Expression Mats and see which is greater.
CC3 2.1.7: 2-64, 2-65, 2-66a & 2-66b Student eTools (CPM)

Click on the links below to access eTools.

2-64 Student eTool (CPM)
2-65 Student eTool (CPM)
2-66a Student eTool (CPM)
2-66b Student eTool (CPM)

Use the eTools below to compare the given Expression Mats in each problem and determine which is greater.

1. CC3 Lesson 2.1.7 2-64:
2. CC3 Lesson 2.1.7 2-65:

3. CC3 Lesson 2.1.7 2-66a:
4. CC3 Lesson 2.1.7 2-66b:

For each pair of expressions, determine which is greater, carefully recording your steps as you go. If you cannot tell which expression is greater, state, “Not enough information.” Make sure that you record your result after each type of simplification. For example, if you flip all of the tiles from the “-” region to the “+” region, record the resulting expression and indicate what you did using either words or symbols. Be ready to share your work with the class.

Left:

Right:

Which is greater?
Click on the links below to access eTools.

2-72 Student eTool (CPM)
2-74 Student eTool (CPM)

2-72:

Use this eTool to help you determine which expression is greater.

![2-72 Student eTool](image-url)
Use this eTool to solve for $x$. 

To learn more about $x$, assume that the left expression and the right expression are equal. The two expressions will be brought together on one mat to create an Equation Mat. The double line down the center of an Equation Mat represents the word "equals." It is a wall that separates the left side of an equation from the right side.

a. Simplify as much as possible and then solve for $x$. Be sure to record your work.

b. Build the equation $2x - 5 = -1 + 5x + 2$ using your tiles by placing $2x - 5$ on the left side and $-1 + 5x + 2$ on the right side. Then use your simplification skills to simplify this equation as much as possible so that $x$ is alone on one side of the equation. Use the fact that both sides are equal to solve for $x$. Record your work.
CC3 2.1.9: 2-82a, 2-82b, & 2-82c Student eTools (CPM)

Click on the links below to access eTools.

2-82a Student eTool (CPM)
2-82b Student eTool (CPM)
2-82c Student eTool (CPM)

Use these eTools below to help you determine if each equation has a solution for \(x\).

1. 2-82a:
2. 2-82b:

While solving homework last night, Richie came across three homework questions that he thinks have no solution. Build each equation below and determine if it has a solution for ‘x’. If it has a solution, find it. If it does not have a solution, explain why not. Explore using the virtual tiles at right.

3. 2-82c:

While solving homework last night, Richie came across three homework questions that he thinks have no solution. Build each equation below and determine if it has a solution for ‘x’. If it has a solution, find it. If it does not have a solution, explain why not. Explore using the virtual tiles at right.
Click on the links below to access the eTools.

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

Use these eTools to create Figure 1 and Figure 5.

1. Drag the Pattern Tile from the tray to the grid.

2. Change the style and color of the Area Tile (optional).
   a. Right click on the tile.
   b. Select the tile.
   c. Click 'Change color' and select the desired color.

1. 3-1a:
2. 3-1b:
CC3 3.1.2: Redwoods: The Tallest Trees Video

Click on the link below for the “Redwoods: The Tallest Trees Video"

Redwoods: The Tallest Trees

1. This short video shows the extent some redwood trees can grow.

![Redwood Tree](image1)

2. The video also shows how scientists go about measuring the height.

![Scientific Measurement](image2)
CC3 3.1.2: 3-11&12 John's Giant Redwood Student eTool (Desmos)

Click on the link below to access eTool.

3-11&12 John's Giant Redwood Student eTool (Desmos)

Use this eTool to answer problems 3-11 and 3-12.

1. Plot the green points by clicking and dragging each one vertically.
2. Type your Rule that goes through the points in Line 9.
3. Replace "?" with the y-value for lines 10, 11, 12, and 16.
Use this eTool to create Figure 0 and Figure 4 and to find the "Bic C's" pattern.

1. Click onto the corner dot of each small black squares and drag to the desired location to create Figure 0 and Figure 4.
2. Enter the values of Tiles Column in line 5.
3. Enter your rule in line 6.

Click on the link below to access the eTool.

3-18 Student eTool (Desmos)
CC3 3.1.3: 3-19 to 3-22 Student eTool (Desmos)

Click on the link below to access eTool.

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

Use this eTool to analyze the "C" pattern further and make predictions.

3-19a:

1. Click each RED points and drag them to the correct place.
2. Click the wrench icon at the right corner of the Desms eTool to adjust the window settings.
   • Adjust the size in X-Axis and Y-Axis.
   • Add a label for your X-Axis and Y-Axis.
3. Click the "Label your points" folder to add values to the missing y-values.
   • Replace "?" with the correct y-value.

3-19b:

1. Enter the y-values in the table located in line 14.
3-20:

1. Enter the rule in finding the y-value in line 20.
Click on the link below to access eTool.

3-70 Student eTool (CPM)

Use this eTool to view the Equation Mat that will be used in solving part (b) of problem 3-70.

Solve the equation on your Equation Mat one step at a time. Every time you make a step, record your work in two ways:

- Record the step that was taken to get from the old equation to the new equation.
- Write a new equation that represents the tiles on the Equation Mat.
Chapter 4
Click on the links below to access eTools.

4-12 Student eTool (CPM)
4-13a Student eTool (CPM)
4-13b Student eTool (CPM)
4-15 Student eTool (CPM)

Create Figure 0 and Figure 4 for each problem.

1. Click the Pattern Tile under the General Tools and drag it to the tile area.

2. Click and hold the tile until the tile settings appear.

3. Select the tile pattern you want to use.

4. Click 'Change color' button and select the desired color.

5. Click the arrow-like symbol on the lower left corner of the tile and drag (to the right or down) to extend/add more tiles.
4-12: Tile Pattern #1

Figure 0

Figure 1

Figure 2

Figure 3

Figure 4
4-13a: Tile Pattern #2

Examine the tile pattern shown at right.

a. What do you notice? After everyone has had a moment to examine the figures independently, discuss what you see with your team.

b. Sketch the next figure in the sequence (Figure 4) on your resource page. Sketch Figure 0, which is the figure that comes before Figure 1. HINT: Drag the RED squares below to the display at right.

c. How is the tile pattern growing? Where are the tiles being added with each new figure?

d. What would Figure 100 look like? Describe it in words. How many tiles would be in the 100th figure? Get as many ways as you can to justify your conclusion. Be prepared to report back to the class with your team’s findings and methods.

4-13b: Tile Pattern #3

Examine the tile pattern shown at right.

a. What do you notice? After everyone has had a moment to examine the figures independently, discuss what you see with your team.

b. Sketch the next figure in the sequence (Figure 4) on your resource page. Sketch Figure 0, which is the figure that comes before Figure 1. HINT: Drag the RED squares below to the display at right.

c. How is the tile pattern growing? Where are the tiles being added with each new figure?

d. What would Figure 100 look like? Describe it in words. How many tiles would be in the 100th figure? Get as many ways as you can to justify your conclusion. Be prepared to report back to the class with your team’s findings and methods.
4-15: Tile Pattern #4

a. Draw Figures 0 and 4 on the resource page or use 4-15 Student eTool (CPM).

b. Find an equation (rule) for the number of tiles in this pattern. On your resource page, label Tile Pattern #4 with its rule. Then use a new color to show where the numbers in your rule appear in the tile pattern.

c. What is the same about this pattern and Tile Pattern #3? What is different? What do those similarities and differences look like in the tile pattern? Is the equation?

d. How is the number of tiles by which the pattern increases each time you move from one figure to the next figure in the sequence represented in each equation?
CC3 4.1.3: 4-22 Student eTool (Desmos)

Click on the link below to access eTool.

[4-22 Student eTool (Desmos)]

Use this eTool to create a graph for Tile Pattern #1 to Tile Pattern #4.

1. Click the arrow to view/hide the table and rule for each Tile Pattern.
2. Enter the rule on the space provided.
3. Enter the y-values in the table.
Rule and table for Tile Pattern #1.

\[ y = (\text{your rule}) \]

<table>
<thead>
<tr>
<th>x</th>
<th>y</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

Rule and table for Tile Pattern #2.

Rule and table for Tile Pattern #3.

Rule and table for Tile Pattern #4.
CC3 4.1.7: 4-65 Student eTool (Desmos)

Click on the link below to access eTool.

4-65 Student eTool (Desmos)

Use this eTool to complete the tasks in problem 4-65.

- Copy the three figures above onto a piece of graph paper. On your graph paper, extend the pattern to include Figures 1 and 5.
- Find a table, a graph, and a rule, for this pattern.
- Which figure will have 79 tiles? Use as many representations as you can to justify your answer.

1. Enter values in the table (line 3).

2. Enter the rule in line 5.
Chapter 5
CC3 5.1.1: 5-2b Student eTool (CPM)

Click on the link below to access eTool.

5-2b Student eTool (CPM)

Use this eTool to complete part (b) of problem 5-2.

Using only “legal” moves, rearrange the tiles to get ‘y’ by itself on the left side of the mat.

- To rearrange the tiles, click on each tile and drag it to the desired location.
CC3 5.2.1: Iditarod- Checkpoints Video

Click on the link below for the “Iditarod-Checkpoints Video"

Iditarod-Checkpoints

1. Iditarod-Checkpoints Video: 2:49 minutes long
2. The map continues to Nome!

3. Volunteers man the checkpoints recording time.
4. Preparation for the trip:
CC3 5.2.1: 5-23 Student eTool (Desmos)

Click on the link below to access eTool.

5-23 Student eTool (Desmos)

Explore math concepts using this eTool:

Click and drag the PURPLE and ORANGE points to reposition the lines.
Use this Equation Mat to determine when the weights of the bunny and cat are equal.

Record all steps while solving for the value of "x".
Chapter 6
CC3 6.1.1: Key-Lock Puzzle (CPM)

Click on the links below.

- Key-Lock Puzzle (CPM)
- Intro 1; Intro 2; Intro 3; Intro 4
- Wall 1; Wall 2; Wall 3; Wall 4
- Star 1; Star 2; Star 3; Star 4
- Challenge 1
- Challenge 2
- Using RT Tool
- Creating an RT Puzzle

1. Key-Lock Puzzle:

- Choose between triangle and key.
- Click the Gear to create puzzles and save.
2. The left tray records all rigid transformation steps!

3. Intro Problems:
   - Drag to translate (or)
   - Click on the translate button in the tray. Choose the desired translation.
   - Click the "?” for complete instructions.
4. When the key is placed in the key hole correctly, the student is congratulated!

5. Wall problems: Each of these have at least one wall which cannot be bumped or crossed.
6. Star Problems:
CC3 6.1.2: Transformation Challenge 1 & 2 (CPM)

Click on the links below to access eTools

Challenge 1 (CPM)
Challenge 2 (CPM)

Use these eTools to complete the task in problem 6-8.

With your team, describe how Rowan could have moved each key from the starting position to the ending position using slides (also called translations), turns (also called rotations), and/or flips (also called reflections).

- Make sure you provide enough detail to describe the moves completely.
- Try to find more than one way he could have moved each key.
- Be ready to justify your ideas with the class.

Challenge 1:
Challenge 2:

Click the grid and drag until you see the red and blue triangles with 2 green walls. Then use the transformation buttons below to move the blue triangle onto the red triangle.

Start: (-2, -4)

Mouse/Touch input is disabled for this puzzle. Please enter your transformations here.
CC3 6.1.3: 6-18 Student eTool (Desmos)

Click on the link below to access eTool.

[6-18 Student eTool (Desmos)]

Use this eTool to explore on how to describe transformations.

1. Click any ORANGE point and drag to move.

![Desmos eTool Image]

---

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-18. Rose changed the position of quadrilateral ABCD to that of quadrilateral WXYZ. &quot;How did the coordinates of the points change?&quot; she wondered.</td>
<td>HINT: DRAG any ORANGE point to the corresponding BLUE point.</td>
</tr>
<tr>
<td>a. Describe how Rose transformed ABCD. Was the shape translated ( slid), rotated (turned), or reflected (flipped)? Explain how you know.</td>
<td></td>
</tr>
<tr>
<td>b. How far did ABCD move? In which direction?</td>
<td></td>
</tr>
<tr>
<td>c. Point B became point X. What are the coordinates of points B and XY Name them using (x, y) notation.</td>
<td></td>
</tr>
<tr>
<td>d. How did the x-coordinate of point B change? How did the y-coordinate change? For each coordinate, write an equation using addition to show the change.</td>
<td></td>
</tr>
<tr>
<td>e. Visualize translating WXYZ 10 units to the right and 12 units up. Where will point X end up? Without counting on the grid, work with your team to find the new coordinates of point X. Write equations using addition to show the change.</td>
<td></td>
</tr>
</tbody>
</table>
Follow the steps Stella wrote below to move the key on the graph from A to B.
What was her last move?

1. Slide the key to the right 3 units and up 6 units.
2. Reflect the key across the line $x = 4$.
3. ???

Use the following buttons to help you move the key on the graph.

- **Translate** (slide) – move the triangle horizontally and vertically.
- **Rotate** (turn) – rotate the triangle around its origin (indicated by the dot).
- **Reflect** (flip) – reflect the triangle across a horizontal or vertical line.

![Image of eTool with keys and buttons](image-url)
For more information on how to navigate the puzzle, click '?' button.
CC3 6.2.1: 6-43 Student eTool (Desmos)

Click on the link below to access eTool.

6-43 Student eTool (Desmos)

Use this eTool to investigate the questions below and make dilations.

- “What happens when each coordinate is multiplied by one half?”
- “What changes when the coordinates are multiplied by 1?”
- “What happens when both of the coordinates are multiplied by −1?”
- “What happens when the coordinates are multiplied by −2?”
1. Click each arrow on lines 8, 10, 12, and 14 to access the tables.

2. Enter points in the tables.
CC3 6.2.2: 6-52, 6-53, & 6-56 Student eTools (Desmos)

Click on the links below to access eTools.

6-52 Student eTool (Desmos)
6-53 Student eTool (Desmos)
6-56 Student eTool (Desmos)

CC3 6-52 Student eTool:

1. Click on the BLACK points and drag them to the vertices of the shape to label them.

2. Enter the points in the table provided in line 7.
1. Enter the points in the table provided in line 8.
CC3 6-56 Student eTool:

1. Enter the points in the tables provided in lines 5 and 8.
Chapter 7
Click on the link below to access eTool.

7-15 Student eTool (Desmos)

Use this eTool to complete parts (a) to (f) of problem 7-15.

HINT: The data from problem 7-13 (see table) and scatterplot for part (a) are already provided in this eTool.
1. Click the circle at left in line 9 to view the line of best fit.

2. Click the ORANGE points and drag (horizontally) to position the line.
Click on the link below to access eTool.

**7-43 Student eTool (Desmos)**

Use this eTool as a graphical presentation. It has information about four bicyclists during a 20-minute portion of a race.

Each color represents a bicyclist:

- **ORANGE** - Graph A
- **GREEN** - Graph B
- **BLACK** - Graph C
- **BLUE** - Graph D
CC3 7.2.3: 7-56 & 7-59 Student eTools (Desmos)

Click on the links below to access eTools.

7-56 Student eTool (Desmos)
7-59 Student eTool (Desmos)

Use these eTools to answer problems 7-56 and 7-59.

7-56 Student eTool:

Slope Triangles A, B, and C
7-59 Student eTool:

Which line or lines have the same slope? Which are steepest? Check your prediction.
Click on the link below to access eTool.

7-87 Student eTool (Desmos)

Use this eTool to demonstrate positioning a line of best fit.

1. Label your axes.
   1. Click the wrench icon on the upper right corner of the graph to show/hide the Projector Mode settings.
   2. Type the label of in the text field for the X-Axis and Y-Axis.
2. Make a scatterplot.

1. Enter the values in the table provided.
3. Position the line of best fit.

1. Click the ORANGE points and drag to position a the line of best fit.
CC3 7.3.2: 7-97 Student eTool (Desmos)

Click on the link below to access eTool

7-97 Student eTool (Desmos)

Use this eTool to complete problem 7-97.

Click on the ORANGE points and drag to position a line of best fit.
Chapter 8
CC3 8.1.1: 8-2 and 8-3 Student eTools (Desmos)

Click on the links below to access eTools

8-2 Student eTool (Desmos)  
8-3 Student eTool (Desmos)

8-2 Student eTool:

Use this eTool to create a table and a graph for problem 8-2.

• Enter the values in the table.

8-3 Student eTool:

Use this eTool to create a table and a graph for problem 8-3.

• Enter the values in the table.
Anita bought a special baseball card for $58.00. Later, she decided to sell it, but she wanted to make a profit. She added 50% to the price she paid and sold the card to Brandon. When he decided to sell it, he also wanted to make a profit, so he added 50% to the price he paid for the card and sold it to Casey. Casey increased the price by 50% and sold the card to Elia, who increased the price another 50% when he sold it to Fernando.

a. Make a table and a graph of the new price after 1, 2, 3, 4, and 5 exchanges. How do you find the new price at each exchange?
CC3 8.1.2: 8-14 Student eTool (Desmos)

Click on the link below to access eTool.

Use this eTool to answer problem 8-14.

Enter the values in the Balance column of the table.
CC3 8.2.3: Powers of Ten Film

Click on the link below for the “Powers of Ten Film"

Powers of Ten Film

1. Title:
2. The film shows powers of 10 going away from an object.

3. The film shows powers of ten getting closer to an object.
Chapter 9
CC3 9.2.3: 9-85 Student eTool (Desmos)

Click on the link below to access eTool.

9-85 Student eTool (Desmos)

Use this eTool to see how the relationship between the side length of a square and the area of a square look like on a graph.

1. Complete the table in line 4.
1. Setup:

\[
\begin{align*}
0.57 &= 0.575757\ldots \\
-0.57 &= -0.575757\ldots \\
0 &= 0
\end{align*}
\]

\[
\begin{align*}
10(0.57) &= 5.757575\ldots \\
- (0.57) &= -0.575757\ldots \\
0 &= 0
\end{align*}
\]

\[
\begin{align*}
100(0.57) &= 57.575757\ldots \\
- (0.57) &= -0.575757\ldots \\
99(0.57) &= 57.0
\end{align*}
\]
2. Removing the repeating part:

3. Finding the fraction equivalent:
CC3 9.2.6: 3D Model Box (CPM)

Click on the link below for the “3D Model Box (CPM).”

3D Model Box (CPM)

1. Click on the box and drag.
2. Drag the box until you have viewed all sides including the views from the top and bottom.
CC3 9.2.7: Pythagorean Proof Video

Click on the link below for the “Pythagorean Proof Video"

Pythagorean Proof Video (Vimeo)

1. Question:

![Pythagorean Theorem Proof]

How do you prove the Pythagorean Theorem?

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2. Screen shot:

3. Screen shot:

Here's another way...

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4. Screen shot:

\[ a^2 + b^2 = c^2 \]

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Chapter 10
CC3 10.1.3: Volume of a Pyramid Video

Click on the link below for the “Volume of a Pyramid Video"

Volume of a Pyramid (Vimeo)  
Volume of a Pyramid (YouTube)  

1. First Video Question:

How many pyramids of equal volume fit inside a cube with the same base?
2. Screen Shot:

![Volume of a Pyramid](image)

3. Second Video Demo:
4. Screen shot:
CC3 10.1.3: Volume of a Cone

Click on the link below for the “Volume of a Cone"

Volume of a Cone (YouTube)

1. Volume of a Cone Demo:
2. Screen shot:

![Image of a cone that is completely filled with water.](image-url)
CC3 10.1.3: Volume of a Sphere

Click on the link below for the “Volume of a Sphere"

Volume of a Sphere (Vimeo)
Volume of a Sphere (YouTube)

1. First Video Question:

Volume of a Sphere

How many spheres...

Fit in a cylinder...

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2. Screen shot:

Volume of a Sphere

\[
\frac{3}{2} \text{ Sphere(s)}
\]

\[
\frac{2}{3} \text{ Cylinder}
\]

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3. Second Video Demo:
4. Screen shot: