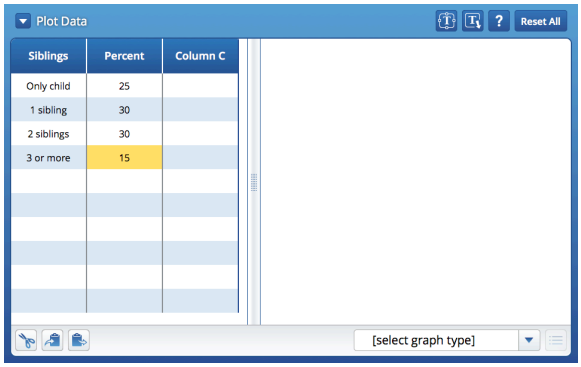
Data and Graphs

Plot Data

You can format, copy, and sort data that you enter in a table. The data can be used to show differences among graph types.

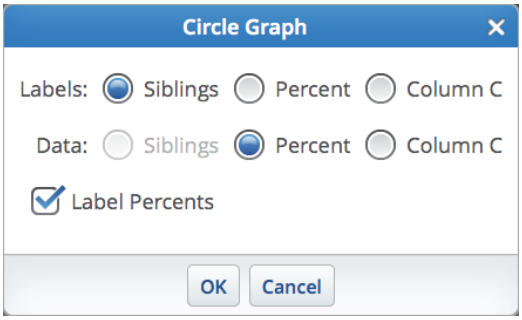
Practice Plotting Data

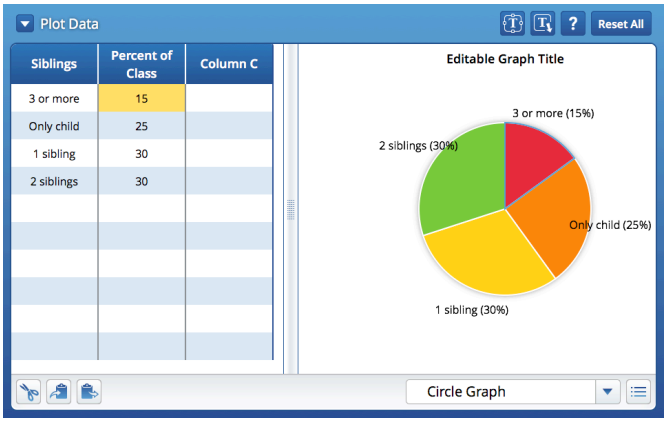
1. Enter data that contains percentages to be shown on a circle graph.
2. Change the header labels.
   - Click on the header labeled "Column A". In the window, click the  and select "New". Type the new header, "Siblings" and then click  to save.
   - Click on the header labeled "Column B". In the window, click the  and select "New". Type the new header, "Percent of Class" and then click  to save.
3. Enter data under the "Siblings" column.
   - Click on the first cell under the header "Siblings" and type "Only child".
   - Click on the second cell and type "1 sibling". Enter "2 siblings" for the third cell and "3 or more" for the fourth.
4. Enter data under the "Percent of Class" column.



   - Click on the first cell under the header "Percent of Class" and type 25.
   - Click on the second cell and type 30.
   - Copy and paste data from the cell above by clicking on that cell and then clicking  . Click on the third cell and click  . You should see 30 in the third cell.
   - Click on the fourth cell and type 15.
5. Order the data from lowest percent to highest.
   - Click on the column header "Percent". In the window under "Sort Rows", click  . Click  to save.
6. Choose a circle graph to display the data.

- Display a circle graph by clicking the drop down menu on the bottom right and clicking on Circle Graph
- In the window, make the circle graph settings as follows:





Data and Graphs

Creating Plots

You can create a graph or plot when you are working in the Primary workspace.

- To choose a graph type, click [select graph type] and then click the graph/plot of your choice.

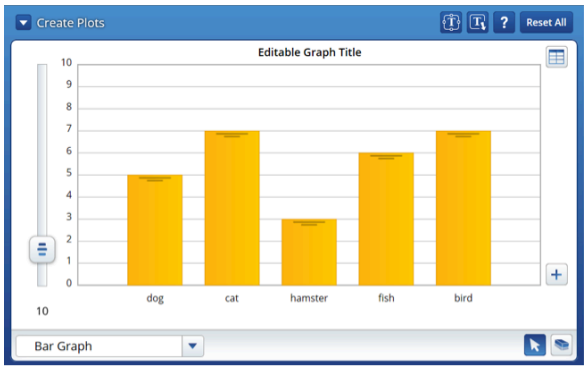
Practice Creating Plots:

Bar Graph

1 Add labels along the bottom of the graph.

- Click on "Label 1" under . Delete the text, and enter "dog".
- Click to add a label. Click on "Label 2" and enter "cat".
- Follow the same procedure as above to make new labels: "hamster", "fish", and "bird". There are now 5 labels for the bar graph.

2 Add vertical bars for each label.



- Click above "dog" and drag up so that the bar reaches "5".
- Click above "cat" and drag up so that the bar reaches "7".
- Follow the same procedure as above to add bars for the rest of the labels as follows: hamster = 3, fish = 6, bird = 7.

3 Add a title to the graph.

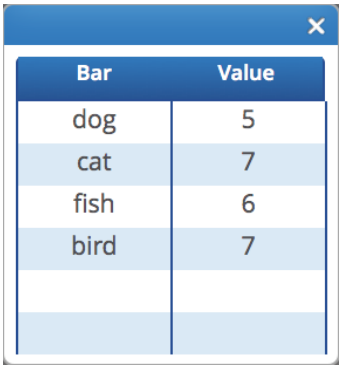
- Click on "Editable Graph Title" at the top of the graph.
- Delete the text and then enter "Types of Pets for Students".

4 Make adjustments to the graph.

- Click to the left of the graph, and slide it down so that the number "8" is the top number.
- To remove a bar from the graph, click and then click the bar above "hamster".

5 View the data in the table.

- Click  . The data you see will be pulled from the bar graph.



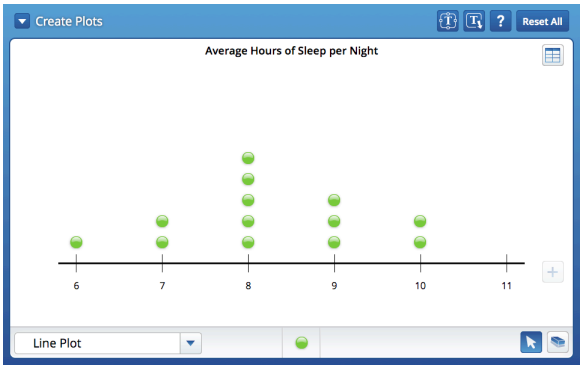
Additional Features:

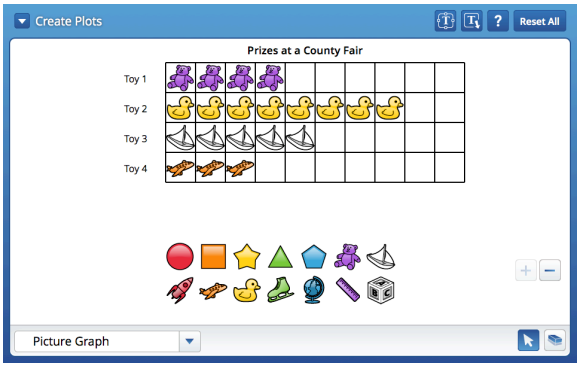
The other workspaces in this mode include:

Circle graph, Line Graph, Scatter Plot, Line Plot, Picture Graph

For the Line Plot, you add labels by clicking  . You add points by clicking and dragging  above the labels.

For the Picture Graph, you can have up to 4 rows with different pictures from the choices provided to represent data. To add a picture to a row, click and drag the picture to the last box that you want it to appear. Click  to erase a picture from the graph.





Data and Graphs

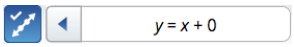
Graph Coordinates and Equations

In the coordinate plane workspace, the x-axis and y-axis intersect at the origin.

Use  when you only want to use the first quadrant of the coordinate plane.

Use  when you want to use the four quadrant coordinate plane.

Practice Graphing on a Coordinate Plane

2 When you open the Equation Grapher, the line graphed is 

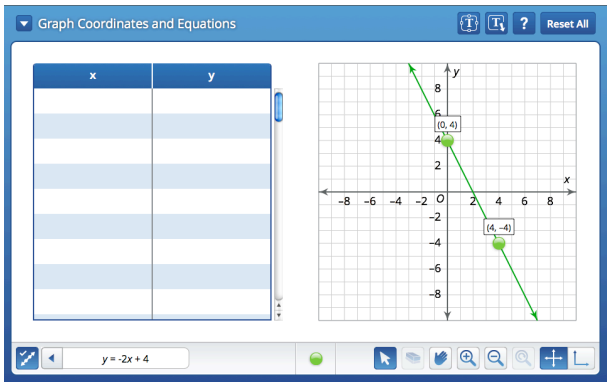
. There is no number in front of "x". The equation can be written as y = 1x + 0, where 1 is the the slope, or steepness of the line. The "0" names the point where the line crosses the y-axis.

2 Change the line so that it crosses the y-axis at a different point.

- Click and drag the point at the origin up along the y-axis. Stop when 4 is shown in the equation in the bottom left of the screen.
- The line now crosses the y-axis at 4.

3 Move the point (4,4) so that the line crosses the x-axis at 2.

- Click and drag the point (4,4) straight down so that the coordinate point shown is (4,–4).
- The line now crosses the x-axis at 2.

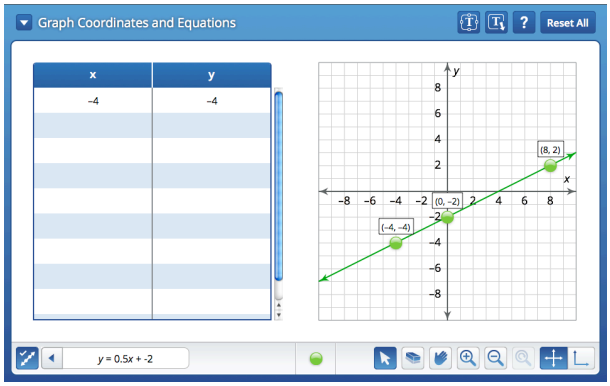


4 Move the line to cross the y-axis at –30.

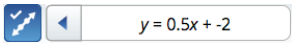
- Notice the scale on the y-axis ranges from –10 to 10. Click on the  .
- Click and drag the point down until the line crosses the y-axis at –30.

5 Change the line so that it has a positive slope of 0.5, or ½.

- Drag the point (0,30) back up to where the y-coordinate is within –10 and +10.
- Click on the  to zoom back in to the original scale.
- Click and drag the point on the y-axis to the point (0,–2). Then click and drag the point (4,–4)



up and to the right to (8,2).

- The equation in the bottom-left of the screen reads 

. The slope is 0.5 and the line crosses the y-axis at -2.

6 Add a coordinate point on the line.

- Click on the  in the bottom of the screen.
- Drag the point so that it reads (−4, −4) on the graph.
- The values −4 and −4 are now highlighted in the first row of the table.