

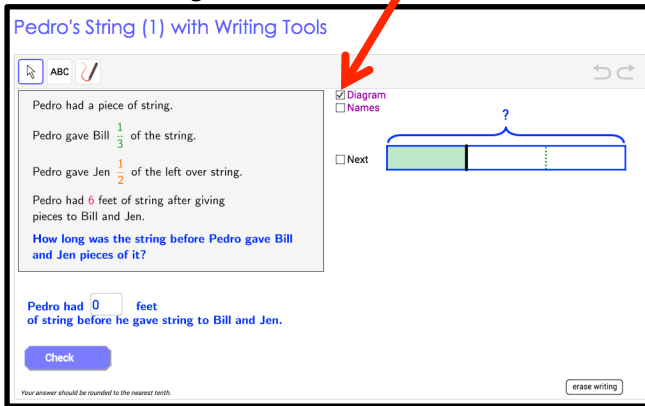
Pedro's String Applets Instructions

The Pedro's String Task is accompanied by an interactive online applet that allows users to manipulate a diagram that is associated with the task. After you complete the example provided, you can click on *Change Values* and enter different values for the problem. As with the example, you can manipulate the diagram and provide a solution. The solution will be checked and feedback will be provided.

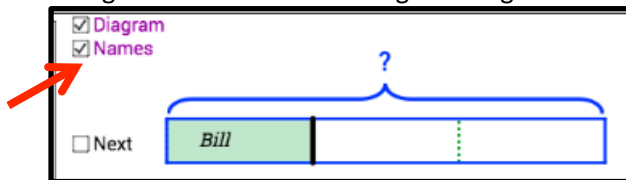
Part I. Pedro's String (1) with Writing Tools

- 1.) Go to the online applet. (**Pedro's String (1) with Writing Tools**)
<https://www.geogebra.org/m/grs9aHHt>

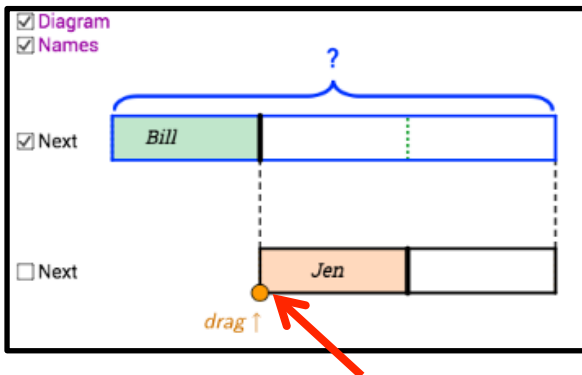
- 2.) Click on the **Diagram** check box



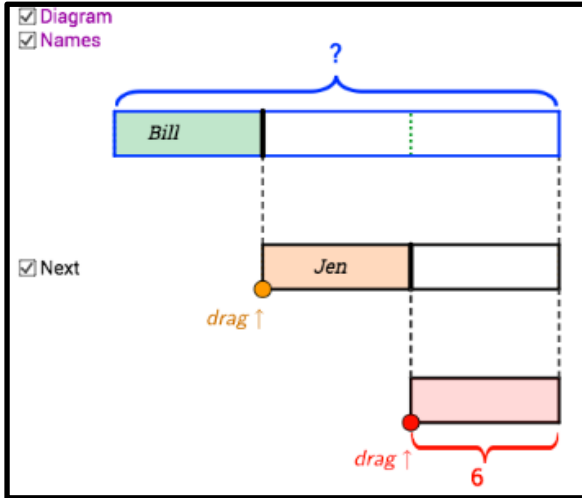
- 3.) Click the **Names** a check box. Notice how the amount that Bill related to the full length of the string. How much of the string is NOT given to Bill? _____



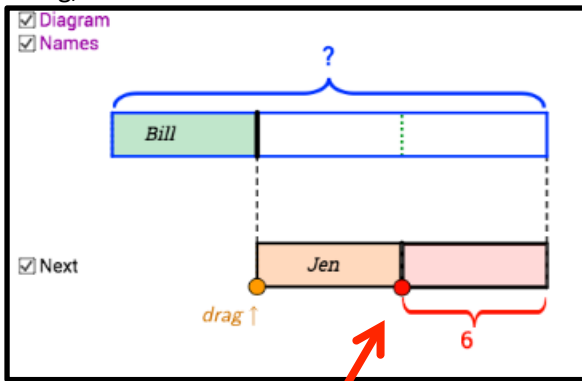
- 4.) Click the **Next** Checkbox.
 Drag the yellow dot up to the original piece of string.
 Notice how $\frac{1}{3}$ is given to Bill and now $\frac{1}{2}$ of the remaining string is given to Jen.
 How much of the original string is being given to Jen?



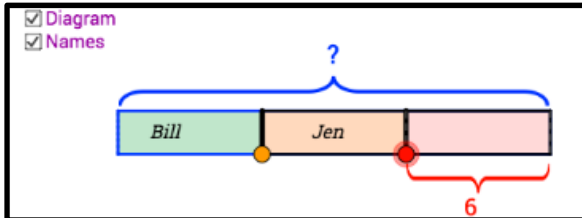
- 5.) Click on the **Next** checkbox.
 How much of the string is left for Pedro after he has given string to Bill and Jen?



- 6.) Drag the red dot up to the piece with Jen labeled on it. If 6 is half of the length of the piece of string, how much does Jen have?



- 7.) Drag the yellow and red dots up to the original piece of string.



- 8.) How much did Pedro have to begin with?
- 9.) **Enter** the result into the answer box and check your answer. Hit enter or return then click on the *Check* button.

Note: The pen tool can be used to mark on the applet to assist with the problem solving. The erase writing button can be used to delete the writing prior to the next problem.

Part II. Pedro's String (1) with Writing Tools

1. After completing the first example you will be able to add your own values to the problem. Click on the *Change Values* button.

Change Values

2. Enter the following values in the applet. (See below)

Pedro had a piece of string.

Pedro gave Bill $\frac{1}{5}$ of the string.

Pedro gave Jen $\frac{1}{4}$ of the left over string.

Pedro had 9 feet of string after giving pieces to Bill and Jen.

How long was the string before Pedro gave Bill and Jen pieces of it?

3. What is the solution? _____

4. After completing the first example you will be able to add your own values to the problem. Click on the *Change Values* button.

Change Values

5. Enter the following values in the applet. (See below)

Pedro had a piece of string.

Pedro gave Bill $\frac{1}{4}$ of the string.

Pedro gave Jen $\frac{1}{3}$ of the left over string.

Pedro had 5 feet of string after giving pieces to Bill and Jen.

How long was the string before Pedro gave Bill and Jen pieces of it?

6. What is the solution? _____
How is this example different than the prior examples?

Part III. Pedro's String (2) with Writing Tools

- 1.) Go back to the online applets and choose Pedro's String (2) with Writing Tools

Notice that you can change the fractions by entering new denominators in the applet as well as changing the amount of the remaining string. You can also determine the number of partitions that the string is broken into by dragging the dot to determine the number of partitions.

- 2.) Enter the following numbers into the applet: Pedro gave Bill $\frac{1}{3}$ of the string. Pedro gave Jen $\frac{1}{3}$ of the leftover string. Pedro had **12** feet remaining.

Move the slider to the number of partitions to match the problem. Check your answer at each step to make sure it is divided the same as shown in the problem.

When you get to the last step, determine the amount of string that Pedro had at the beginning. _____ Enter it into the answer box and check your answer.

- 3.) Refresh your web page to start a new problem. Enter the following numbers into the applet: Pedro gave Bill $\frac{1}{2}$ of the string. Pedro gave Jen $\frac{1}{4}$ of the leftover string. Pedro had **15** feet remaining.

Move the slider to the number of partitions to match the problem. Check your answer at each step to make sure it is divided the same as shown in the problem.

When you get to the last step, determine the amount of string that Pedro had at the beginning. _____ Enter it into the answer box and check your answer.

- 4.) Try other numbers in the applet.