

Directions for the *Comparing Mixtures* Apps

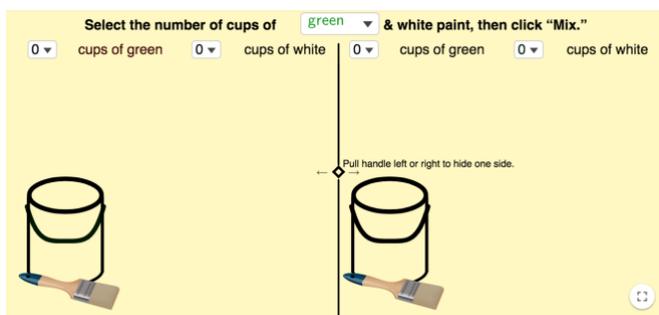
The *Comparing Mixtures (12 cups)* app is available at: [geogebra.org/m/skqDWFbm](https://www.geogebra.org/m/skqDWFbm)

A version with up to 24 cups of each color is available at: [geogebra.org/m/nHZZr3wd](https://www.geogebra.org/m/nHZZr3wd)

Use this app to mix cups of green and white paint virtually.

Compare two mixtures with different ratios to find out which one makes a darker shade of green.

1. Here is the opening screen of the app:

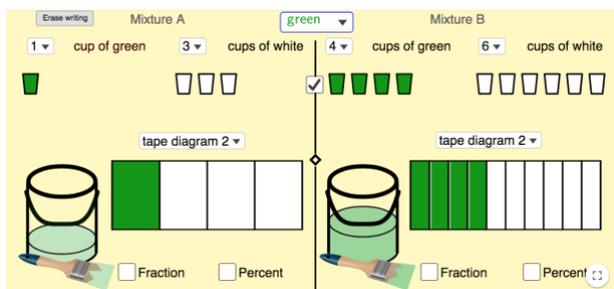


2. To make a mixture of paint, select the number of cups of green paint and white paint by using the pull-down menu. Choose from **0 to 12 cups**. Then, mix the paints by selecting the **Mix** button.

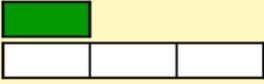
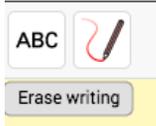
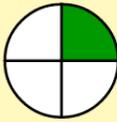
Select the number of cups of paint	Select Mix to combine the paints	After you select Mix

See the color of the mixture in the paint can and a visual of the ratio of green and white.

3. Compare two mixtures of paint by using different representations. In the example below, the **tape diagrams** show the proportion of green paint to white paint in each mixture.



4. Choose different visual representations by using the drop-down menu.

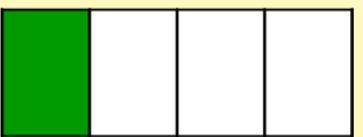
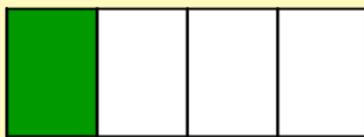
Drop-Down Menu	Visual Representations	
<p>select a visual</p> <p>tape diagram 1 ▼</p> <p>tape diagram 1</p> <p>tape diagram 2</p> <p>circle model</p> <p>draw my own visual</p>	<p>select a visual</p> <p>tape diagram 1 ▼</p> 	<p>Draw my own visual</p>
	<p>tape diagram 2 ▼</p> 	
	<p>circle model ▼</p> 	<p>Select the pen tool to draw and the ABC tool to type. These tools are on the upper left corner of the app. Select the Erase Writing button to erase your work.</p>

5. Choose different numerical representations.

Select **Fraction** to see what fraction of the paint mixture is green and what fraction is white.

Select **Percent** to see what percentage of the paint mixture is green and what percentage is white.

Fraction Percent

 <p><input checked="" type="checkbox"/> Fraction</p> <p>the mixed paint is $\frac{1}{4}$ green the mixed paint is $\frac{3}{4}$ white</p>	 <p><input checked="" type="checkbox"/> Percent</p> <p>the mixed paint is 25% green the mixed paint is 75% white</p>
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6. To **undo** an action, select the left-pointing arrow icon in the upper right corner.



To **redo** an action, select the right-pointing arrow icon in the upper right corner.

