**Proportion Playground Paint Splat Activity Sheet**

Learning Goals

* Students will be able to create equivalent ratios.
* Students will be able to compare unequal ratios in a real-world context involving concentration levels.

**PART A: EXPLORE**

1. Create your favorite shade of green.

 

1. How many different ways can you create your favorite shade of green?



1. What do you notice about the ratios from #2?

 

 **PART B: PREDICT \*\* Make sure you have switched to the PREDICT section of the sim and are**

 **using the black and white paint. \*\***

1. BEFORE you use the sim, make a prediction. Then use the sim to fill out the actual column.

|  |  |  |
| --- | --- | --- |
|  | PREDICTION:\_\_\_\_\_ left is darker\_\_\_\_\_ right is darker\_\_\_\_\_ both are the same shade. | ACTUAL:\_\_\_\_\_ left is darker\_\_\_\_\_ right is darker\_\_\_\_\_ both are the same shade. |
|  | PREDICTION:\_\_\_\_\_ left is darker\_\_\_\_\_ right is darker\_\_\_\_\_ both are the same shade. | ACTUAL:\_\_\_\_\_ left is darker\_\_\_\_\_ right is darker\_\_\_\_\_ both are the same shade. |
|  | PREDICTION:\_\_\_\_\_ left is darker\_\_\_\_\_ right is darker\_\_\_\_\_ both are the same shade | ACTUAL:\_\_\_\_\_ left is darker\_\_\_\_\_ right is darker\_\_\_\_\_ both are the same shade |



1. Use your strategies from #4 to rank the paint mixtures from lightest to darkest. Try first WITHOUT using the sim. Later, you can use the sim to check your work.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
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|  |  |
| --- | --- |
| **Mixture A** |  |
| **Mixture B** |  |
| **Mixture C** |  |
| **Mixture D** |  |
| **Mixture E**You create it! |  |

Challenge: Create Mix E such that it is the middle in the list from lightest to darkest.  |  Lightest: \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_Darkest: \_\_\_\_\_\_\_\_\_\_ | Explain or show work to justify your answer. |



1. For mixtures A, B, C, and D in #5, write a fraction to describe black balloons to total balloons.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Mixture A | Mixture B | Mixture C | Mixture D |
|  |  |  |  |  |

1. Place the fractions from #6 on the number line below.

 

 How does the number line help you confirm your answer to #5?