**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.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  | | --- | --- | | **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?