Proportion Playground

Comparing Unequal Ratios

Warm Up

1) Create at least three fractions that are equivalent to ¾

2) Alice has $6 and Bob has $2. They combine their money to buy a pack of new pencils.

a) What is the ratio of Alice's money to Bob's money?
b) What fraction of the total money is Alice's?
c) What fraction of the total money is Bob's?
d) Suppose the pack of pencils contains 80 pencils. How many of the pencils should Alice get, and how many of the pencils should Bob get?

3) Are there any other ways to compare Alice's and Bob's money?

Learning Targets

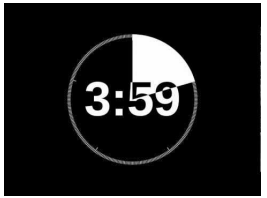
- I can create equivalent ratios.

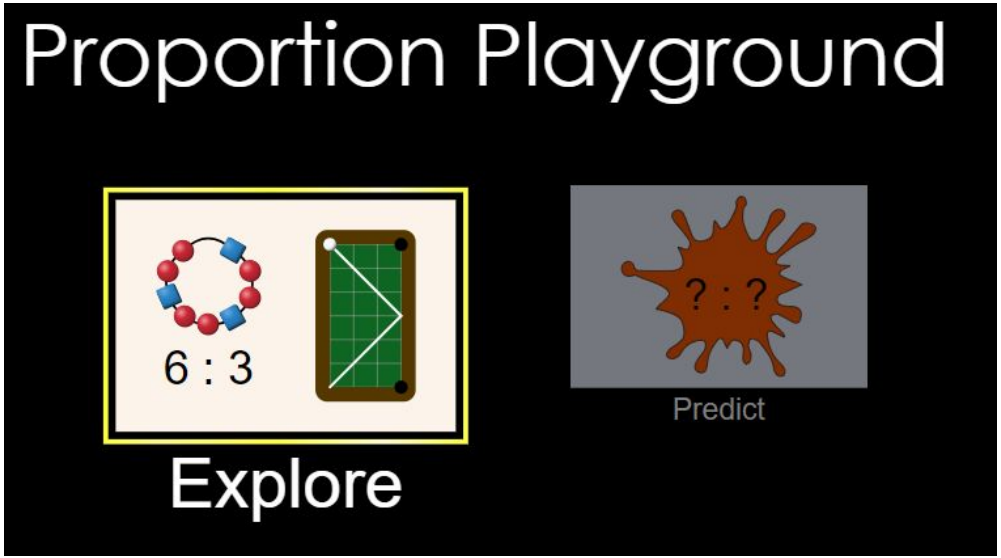
- I can compare unequal ratios in a real-world context involving concentration levels.

Proportion Playground

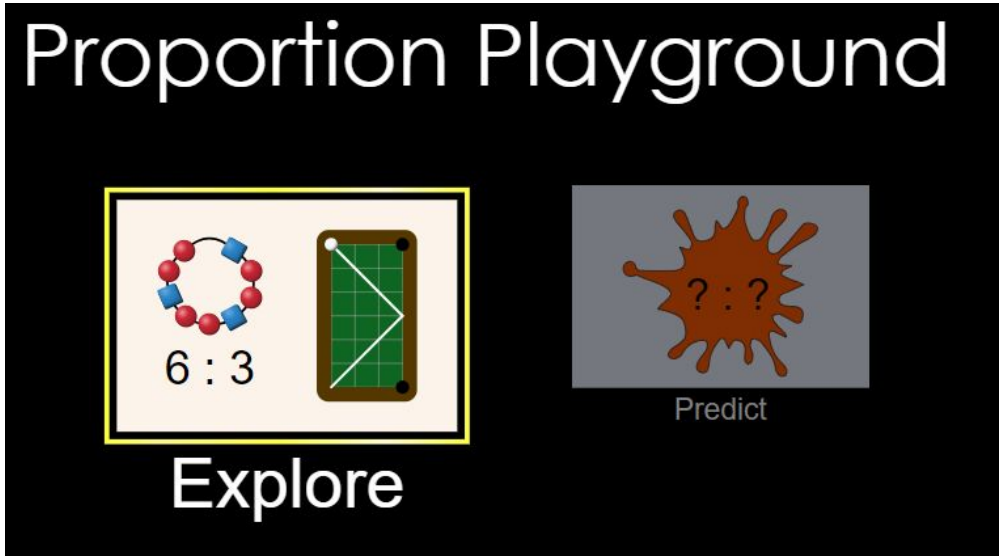
https://phet.colorado.edu/sims/html/proportion-playground/latest/proportion-playground_en.html

Take 5 minutes to work with the Explore part of the sim.





What do you notice?

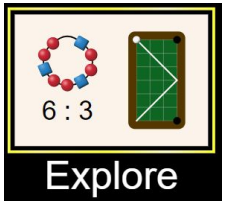


What do you notice about the paint splats that are the exact same color?

What can you learn from 2 paint splats that you cannot learn from seeing only one splat?

Activity Sheet Instructions:

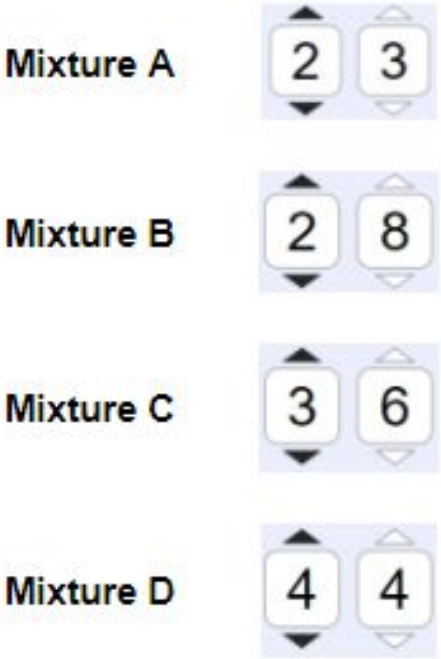
- Work with a partner.
- Part A: Use the Explore part of the sim



- Part B: Use the Predict part of the sim

- We will come back together as a class after #5.

Strategies Discussion



Lightest: _____

_____

_____

Darkest: _____

Mixture A	2 : 3
Mixture B	2 : 8
Mixture C	3 : 6
Mixture D	4 : 4

Heather:

3/6 of mixture C is black paint.

Kathy:

3/9 of mixture C is black paint

Do you agree with Heather or Kathy? Justify your answer.

Heather:

3/6 of mixture C is black paint.

Heather is using a part to part ratio.

Kathy:

3/9 of mixture C is black paint

Kathy is using a part to whole ratio.

Use Kathy’s strategy to complete #6 and #7 on the worksheet.

$$\frac{\text{Number of black balloons}}{\text{Total number of balloons}}$$

Big Ideas for your notes

- What strategies did you use to compare unequal ratios?

Exit Ticket

Saline Water Solution A

4 cups of water

1 cup of salt

Saline Water Solution B

7 cups of water

3 cups of salt

Which solution is saltier?

Show work and explain in words to justify your answer.