

Name: Jennifer Reynolds

Grade Level/Subject: 6 - 8 Math or Pre-Algebra

Topic: Comparing and Ordering Rational Numbers

Objectives (P.A.S.S.): Standard 2: Number Sense- The student will use numbers and number relationships to solve problems. 1. Rational Numbers and Proportional Reasoning: a. Compare and order rational numbers (positive and negative integers, fractions, decimals) in real-life situations.

Introduction: This activity builds number sense with fractions and also helps students see the connections between fractions, decimals and percents. It can be used as a planned activity, a warm up activity or an end of class filler.

Instructional process: Prepare for this activity just once and have it on hand for multiple uses. If you plan to use it just a few times, the cards can be taped to a chalkboard or wall. For extended use, put up a permanent "number line" by running a string from a tack or nail on one side of the chalkboard to the other, over another nail and then down to the tray where it is fastened to a third nail. When not in use, the line can be unhooked and run under the tray, out of the way. Copy the fraction cards on card stock for more durability. Other sets of cards can be used to show decimal and percent equivalents. 3 x 5 index cards could also be used or post it notes.

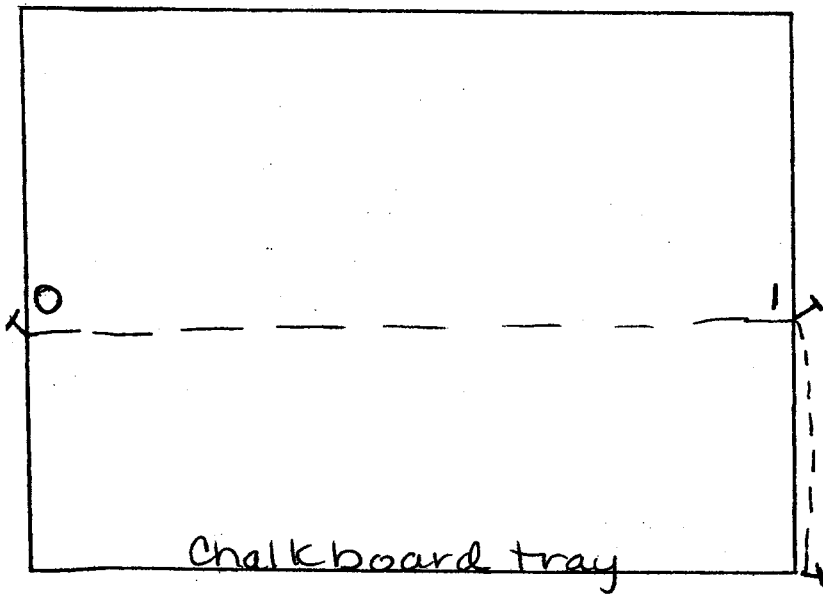
Label the left end of the string zero and the right end of it one. Hand out cards to students who then come up and put their fraction card in place on the number line. Students should explain their reasoning for placement. Ask other students if they agree with the placement and explain why they do or don't agree. Students can use cross products to check their accuracy. Extensions include adding the equivalent fraction cards. These can be used alone in the same way as the simplified fractions or mixed with the simplified fraction cards to show equivalency. Further lessons can include decimal equivalents.

Closure: In closing, give students two fractions such as one-fourth and two-fifths. Have them write a fraction that could be placed between them on the number line and justify their answer.

Assessment: This activity is assessed as students are putting their cards on the number line.

Modifications/Accommodations: I paired students who are more shy or less confident of their math skills with other students to go to the number line. I also let them use "life lines" if they get stuck and need help. I start out by giving some students cards that are easier to place.

Reflection: This has been a good activity for my Pre-Algebra students. I have used it in my Algebra I classes as an end of class filler and they enjoyed it as well. I like having it readily available with little preparation.



When not in use, unhook and run string under the chalkboard tray.

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$$\frac{1}{6}$$

$$\frac{5}{6}$$

$$\frac{1}{7}$$

$$\frac{3}{7}$$

$$\frac{4}{7}$$

$$\frac{6}{7}$$

$$\frac{1}{8}$$

$$\frac{1}{2}$$

$$\frac{1}{3}$$

$$\frac{2}{3}$$

$$\frac{1}{4}$$

$$\frac{3}{4}$$

$$\frac{1}{5}$$

$$\frac{2}{5}$$

$$\frac{3}{5}$$

1 / **9**

8 / **9**

7 / **8**

7 / **9**

5 / **8**

5 / **9**

3 / **8**

4 / **9**

$$\frac{1}{10}$$

$$\frac{3}{10}$$

$$\frac{5}{10}$$

$$\frac{7}{10}$$

$$\frac{1}{12}$$

$$\frac{5}{12}$$

$$\frac{7}{12}$$

$$\frac{11}{12}$$

$$\frac{3}{6}$$

$$\frac{6}{8}$$

$$\frac{2}{6}$$

$$\frac{4}{8}$$

$$\frac{2}{4}$$

$$\frac{2}{8}$$

$$\frac{3}{3}$$

$$\frac{4}{6}$$

$$\frac{8}{8}$$

$$\frac{3}{9}$$

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