

Comparing and Ordering

6670

Introduction

In this activity, students will use a number line to locate and compare rational numbers.

Grades 6-8

NCTM Number and Operations Standards

- Understand numbers, ways of representing numbers, relationships among numbers, and number systems
- Compare and order fractions, decimals, and percents efficiently and find their approximate locations on a number line

Files/Materials Needed

Locate.act, Compare.edc, Between.act

PART 1 LOCATING FRACTIONS, DECIMALS, AND PERCENTS ON A NUMBER LINE

1

- a. Launch TI-Navigator™ on the computer and start the session.
- b. Have each student log into NavNet on their calculator.

2

- a. Load the *Locate.act* activity settings file into Activity Center. This sets up the Activity Center so that students will have a number line on their calculator (from -8 to 8). You may choose to click **Configure** and type a number that will appear as a prompt on the student calculators.
- b. Call out a fraction or decimal, such as $\frac{5}{8}$, and instruct students to move to its approximate location on the number line and mark (but not send) it.
- c. When all students are ready, instruct them to send their position. Then stop the activity.
- d. Have students view the results on the teacher's computer. You can highlight individual points, or groups of points, which will highlight their results in the Activity Center window. Use this opportunity to clarify any confusion students have concerning the position of the number.

- e. You can redo this activity several times (clear the activity data each time) using fractions, decimals, and percents as well as positive and negative numbers.
- f. You can also change the step and range of the number line in Activity Center and redo this activity. For example, you may want to restrict yourself to positive values.

PART 2 COMPARING AND ORDERING FRACTIONS, DECIMALS, AND PERCENTS

3

- a. Open the LearningCheck™ file *Compare.edc* on the computer.
- b. Drag the window divider so the questions in the right column cannot be seen by the students.
- c. Highlight the first question and click *File, Send, Item as Quick Poll*. This will reveal the LearningCheck™ question in the *Poll Prompt* window of **Quick Poll**.
- d. Instruct students to order the numbers by typing the corresponding letters in the appropriate order. Tell students to type each letter without commas or spaces, which will allow **Quick Poll** results to be aggregated.
- e. Review the results with the class.
- f. Repeat steps c through e with the remaining two LearningCheck™ questions. You can also write sets of numbers on the board and have students submit their answers using **Quick Poll**.

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EXTENSION

4

- a. Load the *Between.act* activity settings file into Activity Center.
- b. In this activity, students will attempt to submit a point that falls between a pair of points shown on the teacher's computer in Activity Center. (Three pairs of points will be displayed.)
- c. Once you start this activity, students will see a list on their screen. Have them enter the problem number under **Problem Nmbr** and the corresponding fraction, decimal, or percent under **Answer**. For example, Problem 1 contains two points whose x-values are about 0.34 and 0.50. Challenge students to find a fraction between these two numbers, such as $\frac{3}{8}$, and enter this number under **Answer**. They should enter 1 under **Problem Nmbr** because this is problem number 1. You can redo this activity several times (clear the activity data each time). For example, you might ask students to find a fraction with a specified denominator that falls between the points on the screen.