Everyday Mathematics

THE UNIVERSITY OF
CHICAGO
SCHOOL MATHEMATICS PROJECT

Study Link Help: Decimal Numbers

Decimal numbers are numbers written in standard, base-10 notation that contain a decimal point, such as 2.54. A whole number is a decimal, but it is usually written without a decimal point. When ordering decimal numbers, students must consider the place value of the digits they are comparing.

Help with Study Link Problems

- To help your child develop number sense for comparing decimal numbers, consider having your child model the numbers with dollars and cents. For example, 2.03 can be modeled with 2 dollars and 3 pennies. In Problems 1 and 2, money cannot be used as a model for one number—P 0.101. This number is closest to 0.10 or a dime.

- To help your child visualize comparisons for decimal numbers, consider having your child draw the numbers with base-10 block representations. See *Student Reference Book* pages 32 and 33 for more information about modeling decimal numbers with base-10 blocks. Below is what the base-10 blocks look like and the quantities they represent.

A *flat* is worth 1   A *long* is worth 0.1   A *cube* is worth 0.01
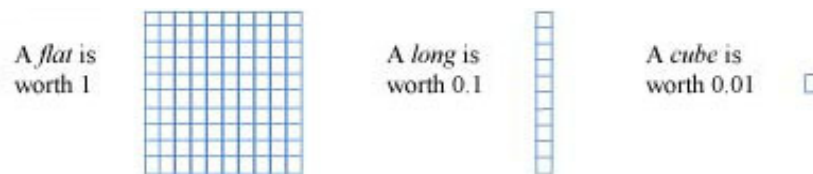
- Your child can draw these like this:

flat   long   cube

Example:

2.04 can be drawn with base-10 blocks like this:

2.2 can be drawn with base-10 blocks like this:

With these representations, you can see that 2.2 is the greater number.   2.2 > 2.04

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- Have your child draw a number line, and mark off and label the points that are halfway between the numbers on the number line. This may help your child see which number is closer to the decimal they are trying to locate.

    Example:

    Compare 2.8 and 2.72

    1. First draw a number line like the one below.
    2. Begin by labeling 2.70, 2.80, and 2.90. Then put in the halfway points for reference.
    3. Finally, decide where to put 2.8 and 2.72.

    2.8 is greater than 2.72. This can be written as **2.8 > 2.72**
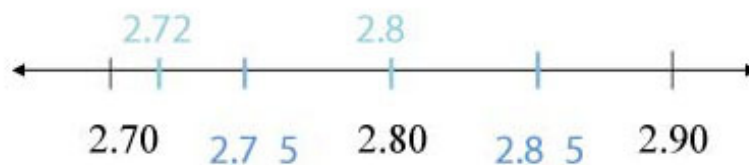
Extra Practice Ideas

- Have students draw base-10 block representations for other decimal numbers.
- Have students compare dollar amounts of items at the grocery store.

    Example:

    Which amount is greater? $1.37 or $3.17?