

Grade 4 Unit 5

Fractions and Decimals



Volume 1 Issue 5

References

Helpful Links:

<http://www.kidsmathgamesonline.com/numbers/decimals.html>
(Comparing and Ordering Decimals Game)

http://www.mathplayground.com/index_fractions.html
(Fraction and Decimal Games)

http://www.abcya.com/fourth_grade_computers.htm#numbers-cat
(Fraction and Decimal Games)

Math Grade 4

Textbook Connection:

Ch. 10, Lessons 10.1-10.8

Textbook Online:

<http://connected.mcgraw-hill.com/connected/login.do>

Student User ID:
ccsd(student ID)
Password: cobbmath1

Dear Parents,

Your student's math class is calling for students to be actively engaged in doing math in order to learn math. In the classroom, students will frequently work on tasks and activities to discover and apply mathematical thinking. Students will be expected to explain or justify their answers and to write clearly and properly. Your student will receive a consumable My Math textbook and online access from his or her teacher.

Concepts Students will Use and Understand

- Express fractions with denominators of 10 and 100 as decimals
- Understand the relationship between decimals and the base ten system
- Understand decimal notation for fractions
- Use fractions with denominators of 10 and 100 interchangeably with decimals
- Express a fraction with a denominator 10 as an equivalent fraction with a denominator 100
- Add fractions with denominators of 10 and 100 (including adding tenths and hundredths)
- Compare decimals to hundredths by reasoning their size
- Understand that comparison of decimals is only valid when the two decimals refer to the same whole
- Justify decimals comparisons using visual models
- Solve problems involving measurement conversions
- Solve multi-step word problems

Vocabulary

decimal: a fraction written in special form; a part of the base-ten number system

decimal fraction: a fraction whose denominator is a power of ten

decimal point: a point used to separate the whole number part from the fractional part of a number

denominator: the bottom number in a fraction; the denominator indicates the total number of equal parts that make up the whole

increment: the process of increasing in number, size, or quantity

numerator: the top number in a fraction; the numerator represents a number of equal parts within the whole

unit fraction: a fraction with a numerator of one

whole number: a number that has no fractional or decimal parts (1, 2, 3, etc.)

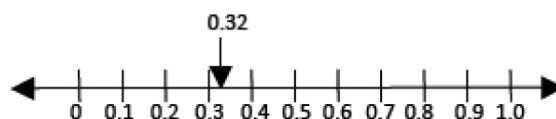
Symbols

3.5– Decimal Point

3/10– Decimal Fraction

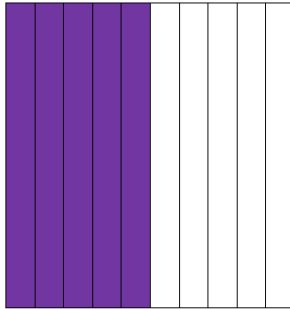
Example 1

Locate decimals on a number line diagram:

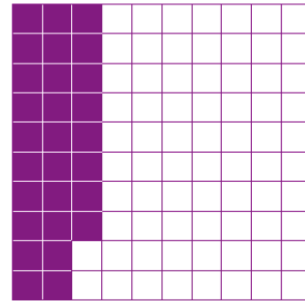


Example 2

Represent decimals and decimal fractions on a tenths and hundredths grid:



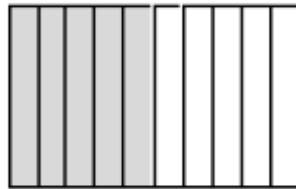
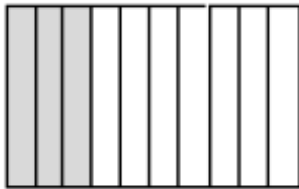
$5/10$ or 0.5



$28/100$ or 0.28

Example 3

Compare decimals using models that are of the same-sized whole:



$0.3 < 0.5$

Activities to Complete at Home:

- Have your child select 1-2 numbers from a deck of cards. Place a decimal in front of the cards to create a decimal number (example 0.32 or 0.4). Give your child a hundredths grid and ask him or her to represent the number on the grid. Can you write the number in expanded form (example: $3/10 + 2/100$)?
- Give your child a number line and ask him or her to label tenths on the number line from 0-3. Can your child identify decimal numbers such as 0.05, 0.54, 2.34, and 1.2 on the number line?
- Ask your child to create 3 decimal numbers using a deck of cards (example, 0.4, 2.5, and 0.37). Place the numbers in order from least to greatest. Have your child explain why this is the correct order based on concepts of place value.
- Investigate the importance of decimals in a real-world scenario! While at the market, discuss how decimals are used in listing the price of items and how decimals are used in providing change to customers at the register!
- While traveling, explore how the odometer on your car increases by tenths of a mile. How much is a tenth of a mile? How does a tenth of a mile compare to one mile?