

# Grade 5 Unit 2

## Adding and Subtracting with Decimals

Volume 1 Issue 2

### References

#### Math Grade 5 Textbook Connection:

Ch. 1, Lessons 1 - 9

Ch. 5, Lessons 1 – 6, 8-10

#### Textbook Online:

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

Ask your teacher for the online passcode.

### 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 students will receive a consumable textbook and online access from their teacher.

### Concepts Students will Use and Understand

- Solve problems by understand that like how numbers, the location of a digits in decimal numbers determines the value of a digit.
- Understand that rounding decimals should be “sensible” for the context of the problem.
- Understand that decimal numbers can be represented with models.
- Understand that addition and subtraction with decimals are based on the fundamental concept of adding and subtracting the numbers in like position values.

### Vocabulary

**Decimal:** Number with one or more digits to the right of the decimal point

**Tenths:** The value of a number one decimal place to the right of the whole number  $1/10$

**Hundredths:** The value of a number two decimal places to the right of the whole number  $1/100$

**Thousandths:** The value of a number three decimal places to the right of a whole number  $1/1,000$

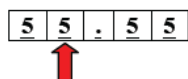
Try <http://intermath.coe.uga.edu/dictionary/homepg.asp> or <http://www.amathsdictionaryforkids.com/> for further examples.

### Symbols

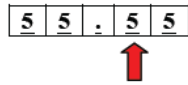
- + addition
- subtraction
- × multiplication
- ÷ division
- . decimal

### Example 1

In the number 55.55, each digit is 5, but the value of the digits is different because of the placement.



The 5 that the arrow points to is  $\frac{1}{10}$  of the 5 to the left and 10 times the 5 to the right. The 5 in the ones place is  $\frac{1}{10}$  of 50 and 10 times five tenths.



**Helpful Links:**

<https://grade5commoncoremath.wikispaces.hcpss.org/5.NBT.7>

<http://www.k-5mathteachingresources.com/5th-grade-number-activities.html>

<http://www.estimated180.com/days.html>

<https://www.illustrativemathematics.org/>

The 5 that the arrow points to is  $\frac{1}{10}$  of the 5 to the left and 10 times the 5 to the right. The 5 in the tenths place is 10 times five hundredths.



**Example 2**

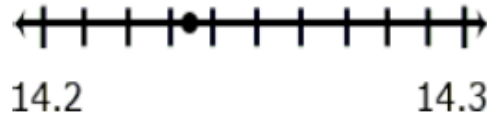
Some equivalent forms of 0.72 are:

$$\begin{array}{ll} \frac{72}{100} & \frac{70}{100} + \frac{2}{100} \\ \frac{7}{10} + \frac{2}{100} & 0.720 \\ 7 \times (\frac{1}{10}) + 2 \times (\frac{1}{100}) & 7 \times (\frac{1}{10}) + 2 \times (\frac{1}{100}) + 0 \times (\frac{1}{1000}) \\ 0.70 + 0.02 & \frac{720}{1000} \end{array}$$

**Example 3**

Round 14.235 to the nearest tenth.

Students recognize that the possible answer must be in tenths thus, it is either 14.2 or 14.3. They then identify that 14.235 is closer to 14.2 (14.20) than to 14.3 (14.30).



**Example 4**

3 tenths subtracted from 4 wholes. One of the wholes must be divided into tenths.



The solution is 3 and  $\frac{7}{10}$  or 3.7.

**Activities at Home**

- Create number cubes or spinners and have the student identify the place value and value of different digits in that number.
- Roll or pick numbers to create decimals. Add, subtract, multiply, or divide the decimals.
- Find the batting averages or other statistics in the sports section of a newspaper and add or subtract the statistics.
- Estimate and find the sums and differences of items at the store and in restaurants.
- Practice basic addition and subtraction facts.
- Choose a four-digit number. Multiply and divide by powers of 10 (10, 100, 1,000, etc.) by moving the decimal point left or right as appropriate.