

1.R.2 Exercises

Concept Check

True/False. Determine whether each statement is true or false. If a statement is false, explain how it can be changed so the statement will be true. (**Note:** There may be more than one acceptable change.)

1. Two hundred thousand, four hundred six and twelve hundredths can be written as 200,406.12.
2. 92.586 is greater than 92.6.
3. On a number line, any number to the left of another number is larger than that other number.
4. When a decimal number is rounded, all numbers to the right of the place of accuracy become zeros in the final answer.

Practice

5. Write $2\frac{57}{100}$ in decimal notation.
6. Write 20.7 in words.
7. Write six and twenty-eight thousandths in decimal notation.

8. Arrange 0.2, 0.26, and 0.17 in order from smallest to largest. Then, graph the data on a number line.

Fill in the blanks to correctly complete each statement.

9. Round 3.00652 to the nearest ten-thousandth.
- The digit in the ten-thousandths position is ____.
 - The next digit to the right is ____.
 - Since ____ is less than 5, leave ____ as it is and replace ____ with 0.
 - So 3.00652 rounds to _____ to the nearest ten-thousandth.

Applications

In each exercise, write the decimal numbers that are not whole numbers in words.

10. **Unicycles:** The tallest unicycle ever ridden was 114.8 feet tall, and was ridden by Sam Abrahams (with a safety wire suspended from an overhead crane) for a distance of 28 feet in Pontiac, Michigan, on January 29, 2004.¹
11. **Water Weight:** One quart of water weighs approximately 2.0825 pounds.
12. **Average Height:** A basketball coach wants to know the average height of his starting lineup. To study this the coach could do an observational study, which involves observing data that already exists, or he could conduct an experiment to gather the data. Should he conduct an observational study or an experiment to determine the average height of his starting lineup?

¹ Source: <http://semcycle.biz/record>

13. **Average Lifespan:** The average lifespan of Americans in 1990 was 75.37 years. If a *parameter* is a numerical description of a population characteristic and a *statistic* is a numerical description of a sample characteristic, does the underlined value describe a parameter or a statistic?
14. **Rounding:** If you were asked to round the underlined value in the previous question to the nearest tenth, what would your answer be? To the nearest whole number?

Writing & Thinking

15. Discuss situations where you think it is particularly appropriate (or necessary) to write numbers in English word form.
16. With **a.** and **b.** as examples, explain in your own words how you can tell quickly when one decimal number is larger (or smaller) than another decimal number.
- a. The decimal number 2.765274 is larger than the decimal number 2.763895.
 - b. The decimal number 17.345678 is larger than the decimal number 17.345578.