5th Grade Math
Curriculum Sample

A Grade Ahead will challenge your students and help them achieve their goals!

Beginning in June 2020, our 5th graders will be participating in A Grade Ahead Online, a blended learning program that integrates both traditional and electronic methods to teach students.

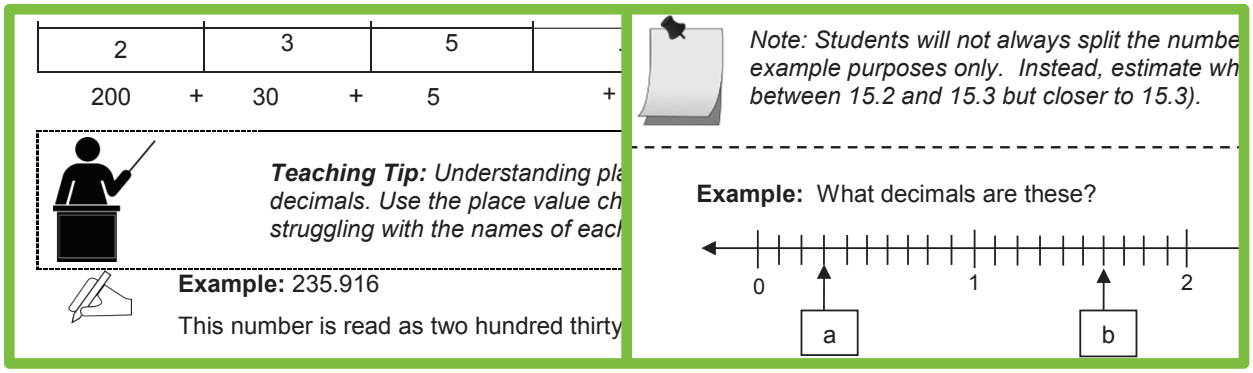
Our students begin the week learning a lesson and answering practice questions with paper and pencil in our monthly lesson booklets. Then they go online to a website to complete three days of online activities to master the topic of the week.

Here's how it works:

Monthly Blended Learning Lesson Booklet

Students receive a lesson booklet each month that is broken into four weeks. Every week, students are introduced to a new topic with explanations and examples followed by student practice questions.

At the end of this document, you will find a full sample of one week's lesson and practice problems from A Grade Ahead's 5th Grade math curriculum.



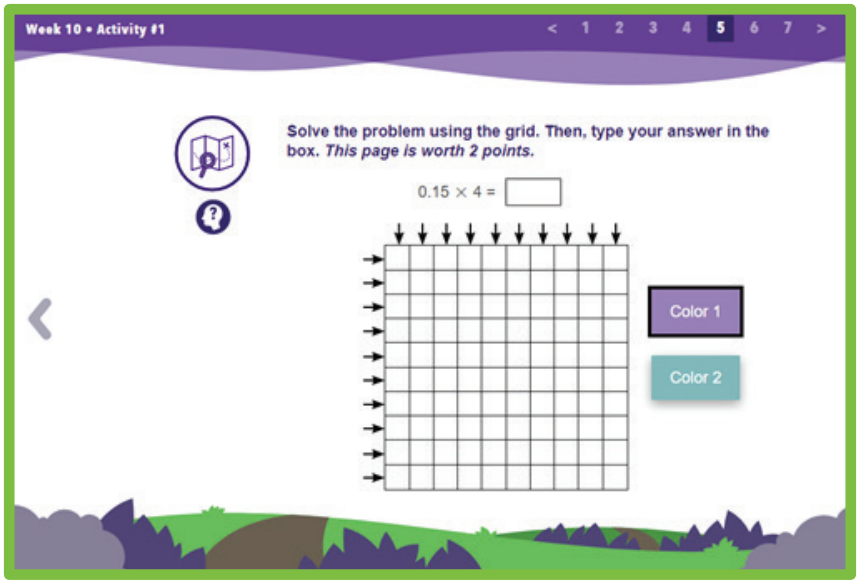
A Grade Ahead Online Activities

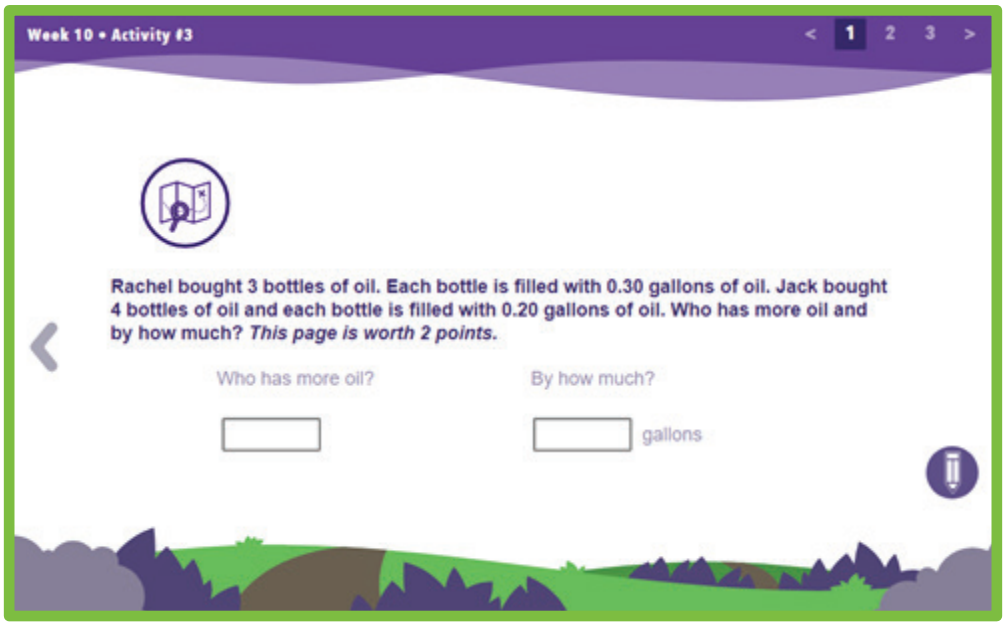
After learning the lesson and practicing problems with a traditional approach, students continue learning online through activities at online.agradeahead.com. Every week, students have three days of homework that can include both curriculum facts and word problems.

A Grade Ahead Online offers many benefits to students and parents, including

- **Interactive and colorful questions** with formats like matching, drag and drop, fill in the blank, multiple choice, and more.
- **Automatic grading** that saves times for parents and provides immediate feedback for students. They know whether they got a question right or wrong as they are going through the homework, so they can make adjustments if necessary.
- **A rationale for every online question** that explains the correct answer, so students can learn from their mistakes immediately.
- **Student progress reports** that are easily accessible without parents needing to upload any data. In fact, a parent has access to raw data from all of his or her student's online work.
- **Adaptive learning paths** that provide more challenging questions to students who perform well on the first set of activities.

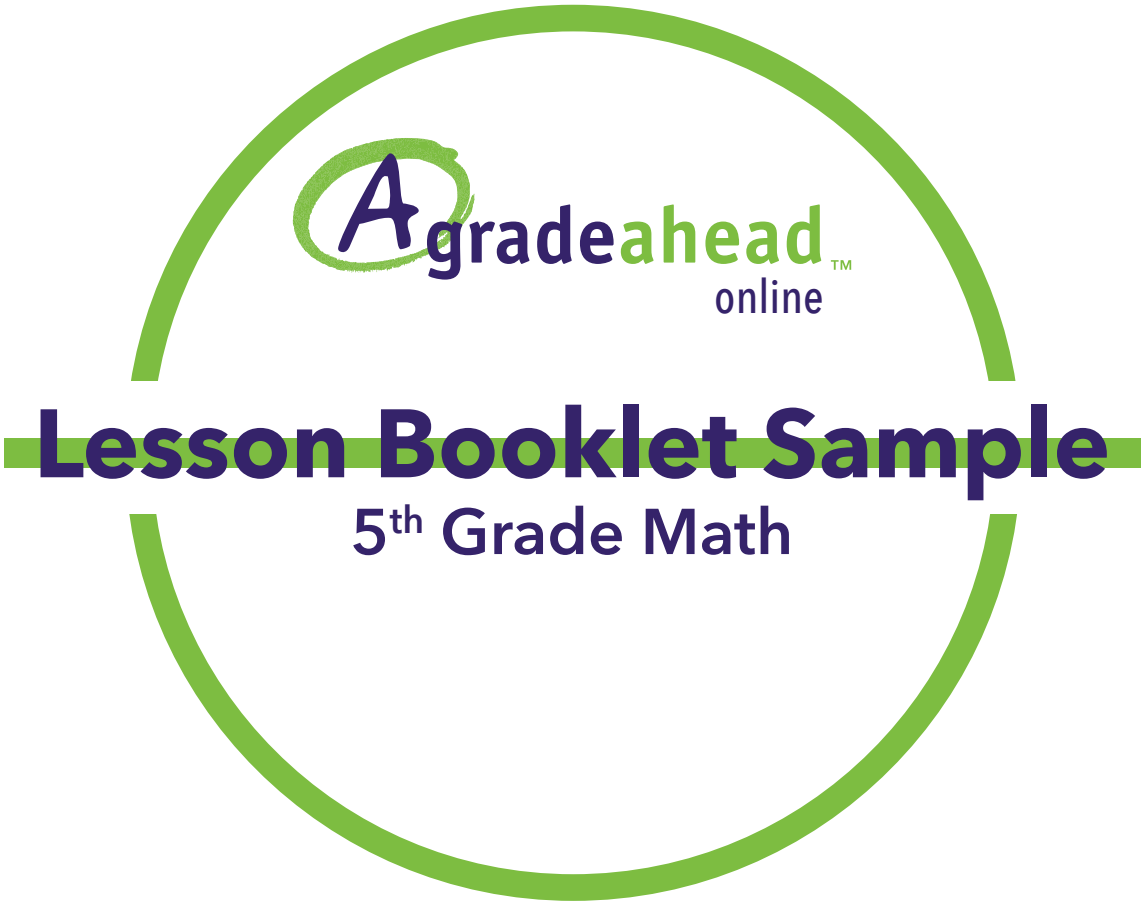
Here is a peek at a few of our online exercises:





Register online today!

Once you have reviewed our attached documents, we hope you are ready to challenge your student today! Visit **agradeahead.com** or call **866.628.4628** to get started.



Lesson Booklet Sample

5th Grade Math

Agradeahead™

5th Grade • Month 3

MATH

BLENDED LEARNING LESSON BOOKLET

NAME _____

Decimals- I

Student Goals:

- ✓ I will be able to read decimal place values.
- ✓ I will be able to represent a decimal on a number line or a 100-square grid.
- ✓ I will be able to compare the values of decimals using number lines.
- ✓ I will be able to add and subtract decimals.

A. Decimal Place Values

To read a decimal number in word form, the number to the left of the decimal point is read first, the decimal point is read as "and," and the number to the right of the decimal point is read with the name of the last place value.

Hundreds	Tens	Ones	Decimal Point	Tenths	Hundredths	Thousandths
2	3	5	.	9	1	6

200 + 30 + 5 + .9 + .01 + .006

Teaching Tip: *Understanding place value is very important when working with decimals. Use the place value chart shown below for students who are struggling with the names of each place value.*

Example: 235.916

This number is read as two hundred thirty-five and *nine hundred sixteen thousandths*.

Example: 374.45 = three hundred seventy-four and *forty-five hundredths*

Example: 10.5 = ten and *five tenths*
10.50 = ten and *fifty hundredths*

Notice that these numbers are of the same value (0 is not worth anything), but are read differently. The zero changes the way it is read since the last number is in different place values.

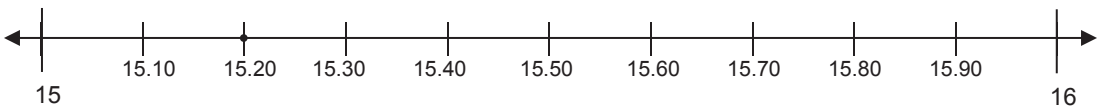
B. Decimals on a Number Line

Decimals can be represented on a number line.

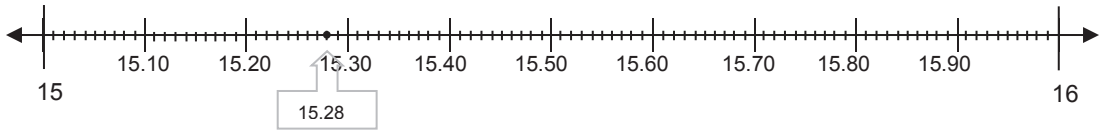
Example: Show 15.28 on a number line.

First, mark the number line with the whole number (left of the decimal point) and the next number up. In this case, these numbers are 15 and 16. The value of this part (from 15 to 16) is one whole.

Next, look at the tenths place value. In this example, it is 2. Since it is the **tenths** value, divide the line between the whole numbers into **ten** equal parts. The value of each part is a tenth. Mark the 2nd one.

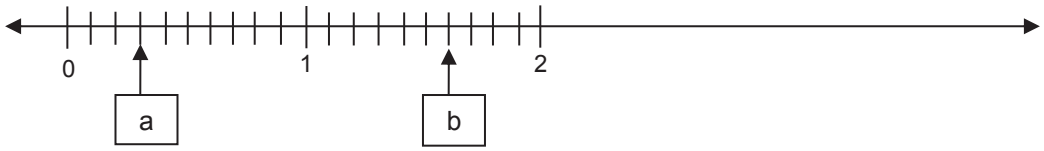


Finally, look at the hundredths value. It is 8. Divide each tenths part into ten equal parts to make a total of 100. Mark the 8th one after 15.2.



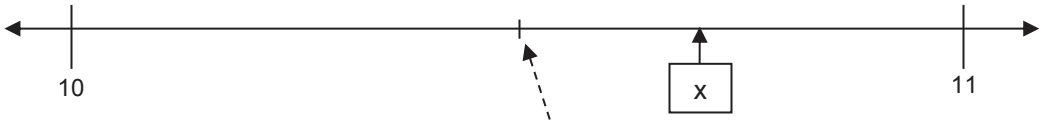
Note: Students will not always split the number line into 100 sections. This was for example purposes only. Instead, estimate where 15.28 would lie (somewhere between 15.2 and 15.3 but closer to 15.3).

Example: What decimals are these?



Notice there are 10 parts between each consecutive whole number, so the decimal is in the tenths.
Since "a" lies between 0 and 1 and points to the 3rd marker, it is 0.3.
Since "b" lies between 1 and 2 and is on the 6th marker, it is 1.6.

Example: Estimate the decimal value of x. Circle all the correct possible answers.



A) 10.18 B) 10.26 C) 10.5 D) 10.75

10.50 is exactly in between the middle of 10 and 11. Mark it on the line. Hence, "C" is incorrect. "A" and "B" are incorrect because x is larger than 10.50. The answer is, therefore, "D."

Note: If there is a 0 in the last place value, it does not need to be written (Example: 0.40 = 0.4).

Student Practice

1. Estimate the decimal value of x. Circle the correct answer.

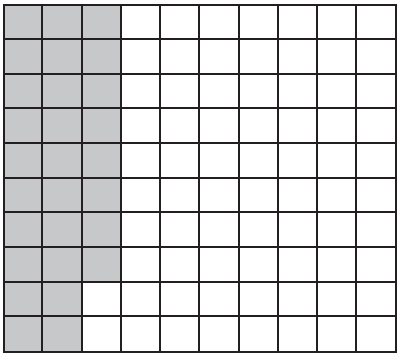
A) 20.10 B) 20.32 C) 20.5 D) 20.75

C. Decimals on a Grid

Decimals can also be represented on a grid.

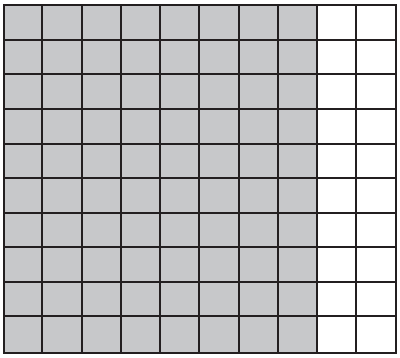
Example: Show 0.28 on the grid.

Use a 10 by 10 grid to represent 1 whole. There are 100 squares in the grid. Each square in the grid is 1 out of 100 squares or 0.01. For 0.28, shade 28 squares ($\frac{28}{100}$).



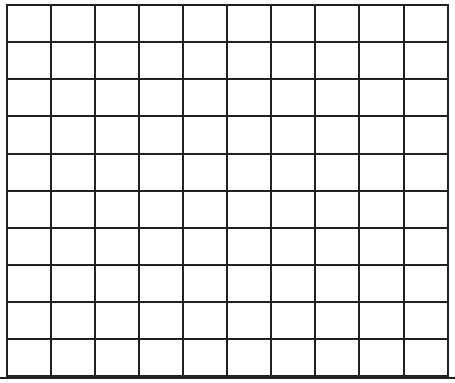
Example: Show 0.8 on the grid.

Use a 10 by 10 grid to represent 1 whole. There are 100 squares in the grid. Each square in the grid is 1 out of 100 squares or 0.01. 0.8 is the same as 8 tens or 80 hundreds. Shade 80 squares ($\frac{80}{100}$).

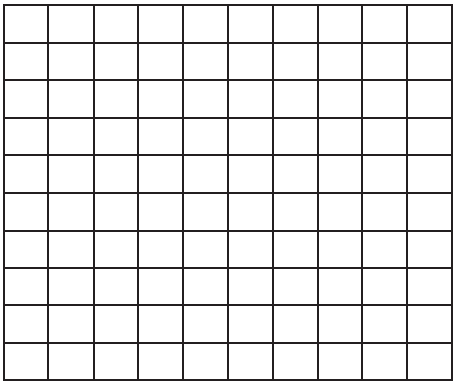


Student Practice

2. Show 0.85



3. Show 0.1



D. Comparing Decimals

Start comparing from the largest place value (i.e. the left most value) and continue to the right until a difference is noted.

Example: 0.2854 ? 0.2845

- The largest place value for each decimal is the tenths place. These are both 2s.
- The hundredths place is an 8 for both numbers.
- The thousandths place is where the first difference occurs (5 and 4).

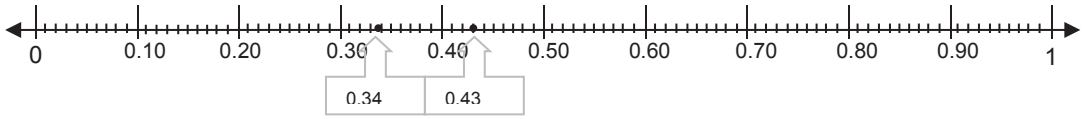
Since 5 > 4, 0.2854 > 0.2845.

Example: 1.345 ? 1.34

These two decimals are the same in the ones, tenths, and hundredths place. The first has a 5 in the thousandths place, and the second has a 0 in the thousandths place, even though it isn't written.
Since 5 > 0, 1.345 > 1.34.

Example: Compare 0.43 and 0.34 using a number line.

The number further right on a number line is larger.



0.43 > 0.34

Student Practice

Compare the following decimals using the number line and write <, >, or = in the box.

4. 7.43 ☐ 7.34

5.

6. 20.09 ☐ 20.9

7.

E. Adding and Subtracting Decimals

The most important concept to remember when adding and subtracting decimals is that the place values of each number must line up. To ensure this, line up the decimal point.

It is helpful to rewrite the problem vertically stacking the decimal point. Then, add or subtract as normal. Write the decimal point in the answer.

Example: 165.467 + 31.432 =

Correct:

$$\begin{array}{r} 165.467 \\ +\ 31.432 \\ \hline 196.899 \end{array}$$

Incorrect:

$$\begin{array}{r} 165.467 \\ 31.432 \\ \hline \end{array}$$

Example: 165.46 – 31.432

Correct:

$$\begin{array}{r} 165.460 \\ -\ 31.432 \\ \hline 134.028 \end{array}$$

Incorrect:

$$\begin{array}{r} 165.46 \\ -31.432 \\ \hline \end{array}$$

Student Practice

Solve the word problems below using <u>stacked addition or subtraction</u>. Show your work.

8. Gas prices are $1.39 per gallon. Sam buys two gallons. He pays with a $100 bill. How much money does he get back?

_____

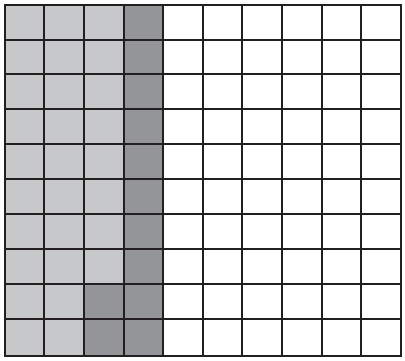
9. An athlete ran a lap in 12.77 sec. He lost the race by 1.09 sec. How much time did the winner take to run a lap?

_____

Example: Show 0.28 + 0.12 on the grid.

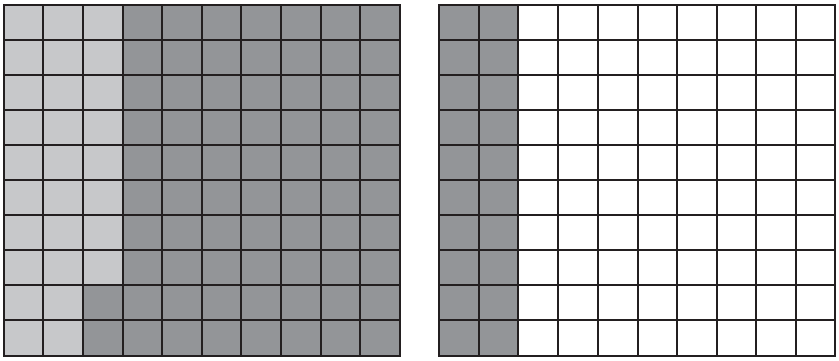
First, shade 28 squares to show 0.28. Then, shade another 12 squares in a different color to show 0.12.

There are 40 squares shaded in all, which represents 40 hundredths = 0.4



Example: Show 0.28 + 0.92 on the grid.

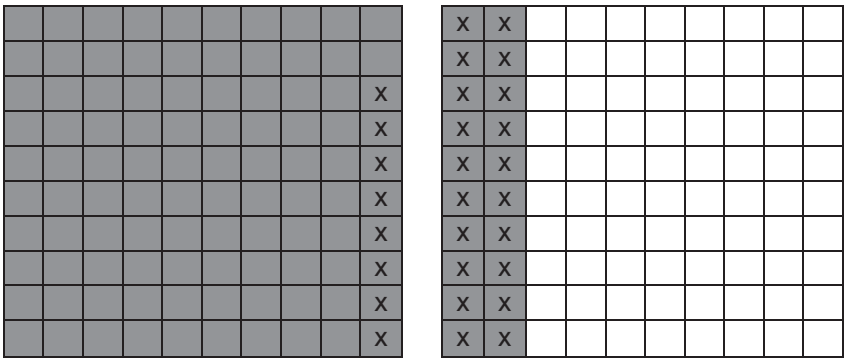
First, shade 28 squares to show 0.28. Then, shade another 92 squares in a different color to show 0.92. Notice, you will need to use another grid.



There is 1 whole grid, which represents 1 whole (1 ones) and 20 more squares, which represents 20 hundredths = 1.2

Example: Show 1.2 – 0.28 on the grid.

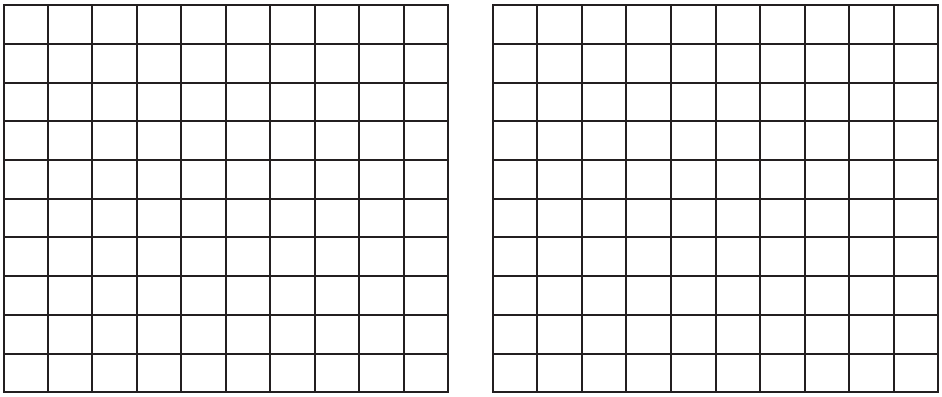
First, shade 120 squares (1 whole grid and 20 squares) to show 1.2. Then, cross out 28 squares from the end and back.



There are 92 squares left, which represents 92 hundredths = 0.92

Student Practice

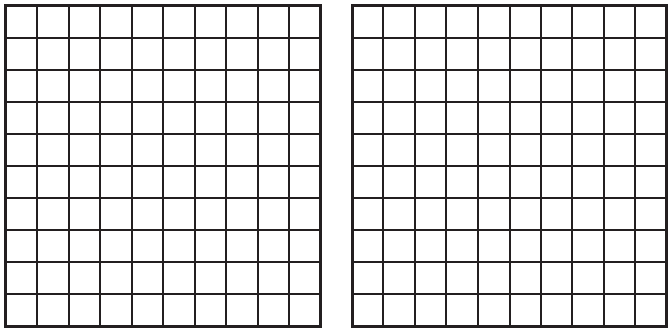
10-11. 0.67 + 0.59 = _____



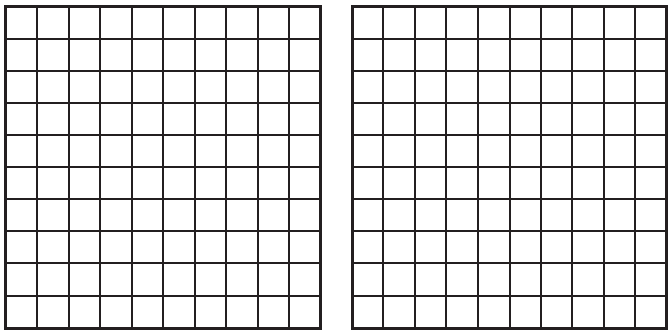
CHALLENGE! Mandy had $1.25 in her wallet. She spent 47 cents to buy a lollipop. Sean has $1.36 in his pocket. He spent 59 cents to buy a slice of pizza.

12-13. How much money do they have left? Use the grids below.

Mandy _____

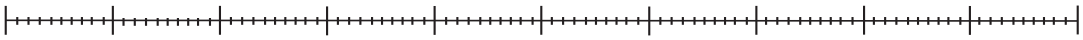


Sean _____



14-15. Who has more money now? Use the number line to compare.

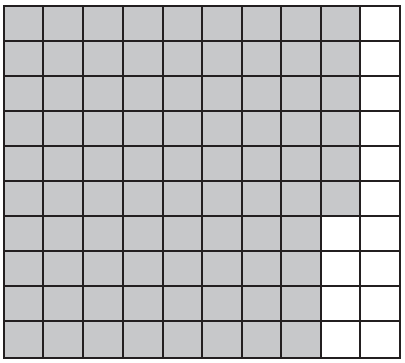
_____



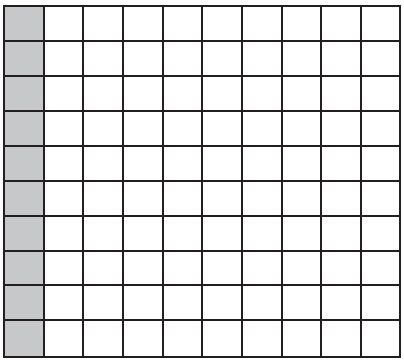
Answers of Student Practice

1) B

2) 0.85

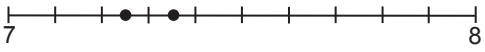


3) 0.1



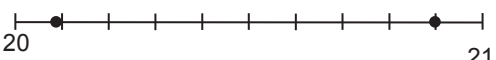
4) >

5)



6) <

7)



8) $97.22 [− 2.78]

100.00

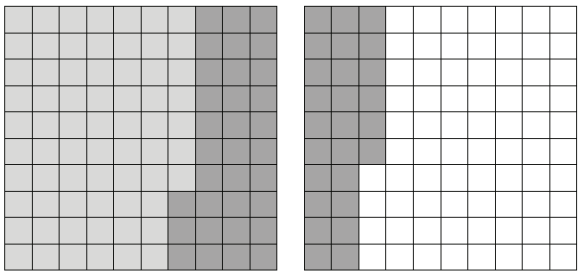
12.77

97.22

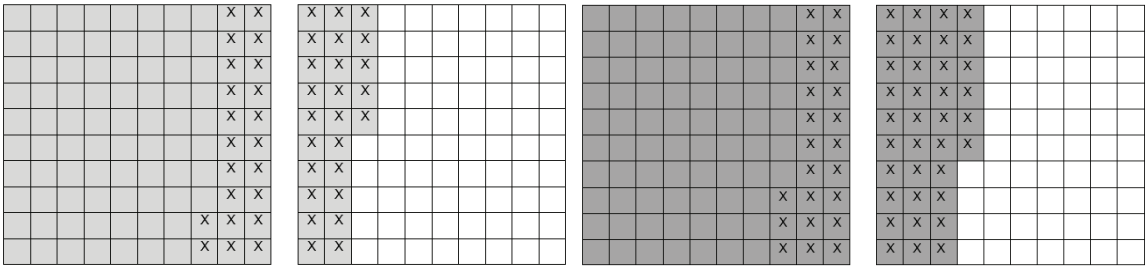
9) 11.68 seconds [− 1.09]

11.68

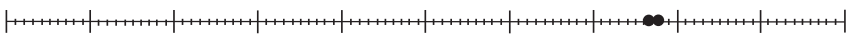
10-11) 1.26



12-13) Mandy $0.78 and Sean $0.77



14-15) Mandy has more money now.



Continue your weekly practice online!