

WHAT WE ARE LEARNING

Place Value of Decimals

VOCABULARY

Here are the vocabulary words we use in class:

Decimal A number with one or more digits to the right of the decimal point.

Tenth If you divide one whole by 10, you get one tenth ($\frac{1}{10}$).

Hundredth If you divide one whole by 100, you get one hundredth ($\frac{1}{100}$).

Thousandth If you divide one whole by 1,000, you get one thousandth ($\frac{1}{1,000}$).

Ten-thousandth If you divide one whole by 10,000, you get one ten-thousandth ($\frac{1}{10,000}$).

Equivalent decimals

Different names for the same number or amount.

Name

Date

Dear Family,

Your child has been learning about decimals, equivalent decimals, and place value of decimals. A place-value chart can be used to help find the value of each digit in a decimal. Here is an example using the number 3.6254.

Ones	Tenths	Hundredths	Thousandths	Ten-Thousandths
3	6	2	5	4
3×1.0	6×0.1	2×0.01	5×0.001	4×0.0001
3.0	0.6	0.02	0.005	0.0004

To help your child with place value and decimals, you may wish to complete the activity that follows.

To help your child's thinking, ask questions such as these as you work together:

What is the decimal point used for? Your child might say: It marks the place between a whole number and a part of a number whose value is less than 1.

Does the value of the digits increase or decrease as you move to the right? Your child might say: The value decreases.

What does that mean? Your child might say: As you move to the right of the decimal point, the digits stand for smaller and smaller parts of a whole.

As you work together, keep in mind that decimals play a role in everyday life. Scientists use decimals in measurements and calculations, as do you when you write a money amount in dollars and cents.

Sincerely,



Decimal Challenge

This is a game for 2 players.

1. You will need 20 cards or pieces of paper, labeled 0 through 9 (two for each number). Check that they fit the squares on the game board.
2. Shuffle the cards and place them facedown in a stack.
3. Each player draws a card and places it faceup in one of the squares on the game board.
4. If you draw 0, you have three choices: (1) place 0 on the board, (2) switch any two digits on the board to make a greater number, (3) move a card from its space to an empty space. If you don't use the 0 card, set it aside.
5. Play until all spaces are filled. The greater number wins the round. The player who wins 2 out of 3 rounds wins the game.

PLAYER 1	<input type="text"/>	.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
PLAYER 2	<input type="text"/>	.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Name _____

Place Value of Decimals

Write the number as a decimal and as a fraction or a mixed number.

1. $30 + 0.2 + 0.08$

decimal _____

fraction/mixed number _____

2. $10 + 7 + 0.3 + 0.09$

decimal _____

fraction/mixed number _____

3. $2 + 0.1 + 0.07$

decimal _____

fraction/mixed number _____

4. two and two hundred twenty-one thousandths

decimal _____ fraction/mixed number _____

5. twelve and fifty-four hundredths

decimal _____ fraction/mixed number _____

Write in standard form and in expanded form.

6. seven hundred seventeen ten-thousandths

standard _____ expanded _____

7. fifty-two and fifty-six hundredths

standard _____ expanded _____

Write *equivalent* or *not equivalent* to describe each pair of decimals.

8. 2.06 and 2.60

9. 3.10 and 3.100

10. 4.02 and 4.002

11. 7.201 and 7.20

12. 8.25 and 8.250

13. 5.03 and 5.30

Write $<$, $>$, or $=$ in each \bigcirc .

14. 35.49 \bigcirc 35.490

15. 57.085 \bigcirc 57.850

16. 48.25 \bigcirc 48.23

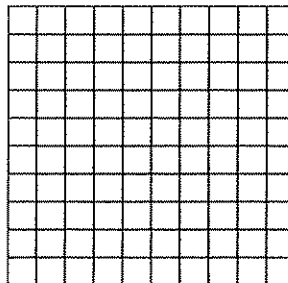
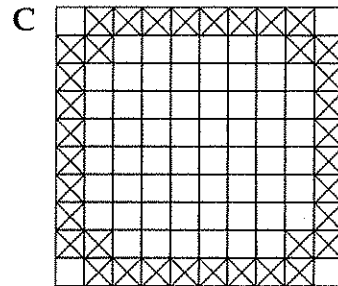
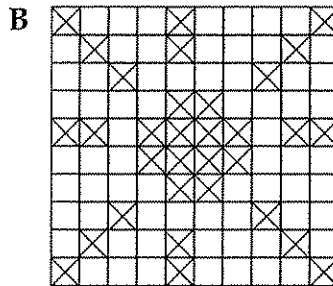
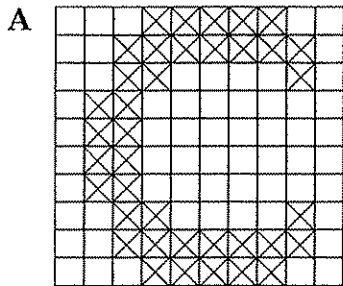
17. 18.576 \bigcirc 18.578

Answers: 1. 30.28; 30 $\frac{28}{100}$; 2. 17.39; 17 $\frac{39}{100}$; 3. 2.17; 2 $\frac{17}{100}$; 4. 2.221; 2 $\frac{221}{1000}$; 5. 12.54; 12 $\frac{54}{100}$; 6. 0.07 + 0.001 + 0.0007; 0.0717; 7. 50.56; 50 $\frac{56}{100}$; 8. not equivalent; 9. equivalent; 10. not equivalent; 11. not equivalent; 12. equivalent; 13. not equivalent; 14. =; 15. <; 16. >; 17. >



Needlework is a craft that many enjoy. Finished pieces called *samplers* often have lettering and art. You can use a 10×10 grid to plan your own sampler.

1. Look at the ideas for sampler designs suggested below. There are 100 squares in each grid. Write a decimal for the part of each 10×10 grid that makes up each design.
2. Then make your own design. To do this, put an X in the squares you wish to shade for your design. When you have finished marking your design, count the number of squares you marked. Write a decimal for the part of the 10 by 10 grid that makes up your design.
3. If you want to try other designs, make 10×10 grids on another sheet of paper or use graph paper.



Answers: 1. A 0.38 B 0.32 C 0.36 2. Answers will vary.