

## Examples of how students will develop their understanding of place value in Fifth Grade

Grade Four Mathematics	Grade Five Mathematics	Grade Six Mathematics
<ul style="list-style-type: none"> <li>•Use place value understanding to round multi-digit whole numbers to any place</li> <li>•Use place value understanding to find products of two multi-digit numbers</li> <li>•Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right</li> <li>•Compare two multi-digit numbers based on the meanings of the digits in each place, using the symbols &gt; (more than), = (equal to), and &lt; (less than)</li> </ul>	<ul style="list-style-type: none"> <li>•Use place value understanding to round decimals to any place</li> <li>•Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and <math>\frac{1}{10}</math> of what it represents in the place to its left</li> <li>•Read, write, compare decimals based on the meaning of the digits in the tenths, hundredths, and thousandths place, using the symbols &gt;, =, &lt;</li> </ul>	<ul style="list-style-type: none"> <li>•Understand that positive and negative numbers are used together to describe quantities having opposite directions or values</li> <li>•Understand a rational number (fraction, decimal, and percent) as a point on the number line</li> <li>•Understand ordering and absolute value of rational numbers</li> </ul>

Students recognize that a 5 in the thousandths place is only one tenth the value of a 5 in the hundredths place

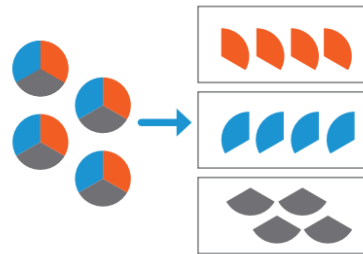


Students use place value understanding to figure out that, based on where the digits are located within the number, 0.115 is less than 0.151.

## Examples of how students will learn about and work with fractions

Grade Four Mathematics	Grade Five Mathematics	Grade Six Mathematics
<ul style="list-style-type: none"> <li>•Break down a fraction into smaller fractions with the same denominator, or bottom number, in more than one way (<math>\frac{3}{8} = \frac{1}{8} + \frac{1}{8} + \frac{1}{8} = \frac{2}{8} + \frac{1}{8}</math>)</li> <li>•Explain why a fraction is equal to another fraction</li> <li>•Add and subtract mixed numbers (whole numbers mixed with fractions, such as <math>1\frac{1}{4}</math> with the same denominator</li> <li>•Multiply a fraction by a whole number</li> </ul>	<ul style="list-style-type: none"> <li>•Interpret a fraction as division of the numerator (the top number) by the denominator (the bottom number)</li> <li>•Add and subtract fractions with different denominators</li> <li>•Multiply a fraction by a whole number or another fraction</li> <li>•Divide fractions by whole numbers and whole numbers by fractions</li> </ul>	<ul style="list-style-type: none"> <li>•Divide fractions by fractions using visual models and equations to show the problem</li> </ul>

Students will use pictures such as this to see that  $4 \div 3$  is the same as dividing 4 objects equally among 3 shares, or having 4 thirds ( $\frac{4}{3}$ ).



Understanding how to divide objects into equal shares prepares students for the division of fractions.

# @range Unified School District

## A Parent's Guide to Mathematics Curriculum

*"Tell me and I'll forget.  
Show me and I'll remember.  
Involve me and I'll understand."  
-Confucius*



## FIFTH GRADE

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## Students Need Skills To Be Successful In the 21<sup>st</sup> Century!

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In order for students to be 21<sup>st</sup> Century scholars Orange Unified School District is committed to ensuring that all students graduate high school with the skills they need to be successful in a global society. In mathematics, there are three shifts that will help prepare students for success in the 21<sup>st</sup> Century. First, instruction will concentrate on a more focused set of major math concepts and skills. This will allow students time to master these skills at a level of depth that leads to application and innovation. Second, concepts and skills are presented in a more organized way throughout the year and from one grade level to the next. This ensures a coherent learning sequence that supports students' mathematical development. Third, rich and challenging math content will be used to engage students in solving real-world problems in order to make math more relevant and meaningful.



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## What Your Child Will Learn In Fifth Grade

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In grade five, students will build their understanding of the place value system by working with decimals up to the hundredths place. Students will also add, subtract, and multiply fractions, including fractions with unlike denominators. They will continue to expand their geometry and measurement skills, learning the concept of volume and measuring the volume of a solid figure. Activities in these areas will include:



- Quickly and accurately multiplying multi-digit whole numbers
- Dividing numbers with up to four digits by two digit numbers
- Using exponents to express powers of 10 (in  $10^2$ , 2 is the exponent)
- Reading, writing, and comparing decimals to the thousandths place
- Adding, subtracting, multiplying, and dividing decimals to the hundredths place
- Writing and interpreting mathematical expressions using symbols such as parentheses. For example, "add 8 and 7, then multiply by 2" can be written as  $2 \times (8+7)$ .
- Adding and subtracting fractions with unlike denominators (bottom numbers) by converting them to fractions with matching denominators
- Multiplying fractions by whole numbers and other fractions
- Dividing fractions by whole numbers and whole numbers by fractions
- Analyzing and determining relationships between numerical patterns
- Measuring volume using multiplication and addition

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## Collaborating With Your Child's Teacher

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You are an important part of your child's education! Reaching out to your child's teacher is highly encouraged and welcomed. Ask to see a sample of your child's work or bring a sample with you. Ask the teacher questions like:

- ✓ Is my child at the level where he/she should be at this point of the school year?
- ✓ What are my child's strengths in math?
- ✓ What do you think is giving my child the most trouble? How can I help my child grow in this area? What resources are available for support?
- ✓ What can I do to help my child with upcoming work?

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## Helping Your Child Learn Outside Of School

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- ✓ Use everyday objects to allow your child to explore the concept of fractions. For example, have your child divide a candy bar (or a healthy snack) between three people. Ask, "How much does each person receive?" (Each person would receive  $\frac{1}{3}$ ). Suppose there are three candy bars that you plan to share with two friends. Have your child describe the amount that each person will receive.
- ✓ Have your child explain how to write fractions in different ways. For example, what are some different ways to write  $\frac{4}{3}$ ? He or she could answer  $4 \div 3$ ,  $1\frac{1}{3}$ ,  $\frac{2}{3} + \frac{2}{3}$ ,  $2 \times \frac{2}{3}$ ,  $\frac{8}{6}$ ,  $4 \times \frac{1}{3}$ , etc.
- ✓ Ask your child to give you a fraction equal to a decimal. For example, what are two fractions that can be 0.6? Answer could include  $\frac{6}{10}$ ,  $\frac{60}{100}$ ,  $\frac{12}{20}$ , or  $\frac{3}{5}$ .
- ✓ Encourage your child to try to make sense of problems and persevering when a problem seems difficult.
- ✓ Make generalizations based on structures or patterns of previous learning.