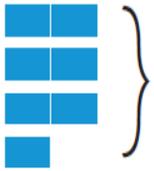


## Example of a problem involving the division

Ann has  $3\frac{1}{2}$  lbs of peanuts for the party. She wants to put them in small bags each containing  $\frac{1}{2}$  lb. How many small bags of peanuts will she have?



Students use their knowledge of fractions to see that there are 7 halves in  $3\frac{1}{2}$  lbs, so there will be 7 bags of peanuts.



Students can also find how many halves are in  $3\frac{1}{2}$  by applying the traditional procedure of dividing  $3\frac{1}{2}$  by  $\frac{1}{2}$ .

$$3\frac{1}{2} = \frac{7}{2}$$

$$\frac{7}{2} \div \frac{1}{2} = \frac{7}{2} \times \frac{2}{1} = 7$$

## Examples of a problem involving ratios

A slime mixture is made by mixing glue and liquid laundry starch in a ratio of 3 to 2. How much glue and how much starch are needed to make 90 cups of slime?



Parts	Quantities
5 parts	90 cups
1 part	$90/5 = 18$ cups
2 parts	$2 \times 18 = 36$ cups
3 parts	$3 \times 18 = 54$ cups

Using knowledge of ratios and proportions, students see that if each cup of slime is made up of 3 parts glue and 2 parts starch, there are 5 parts in each cup. They can then compute the quantity of one, two, and three parts of 90 cups to determine the exact amounts of glue and starch needed.

### Grade Six Mathematics

- Understand the concept of a ratio and use the correct language to describe it
- Understand the concept of a unit rate (the rate per unit, or a ratio with a denominator of 1) and use the correct language to describe it
- Use ratio and rates to solve real-world problems

## Helping your child learn outside of school

1. Ask your child to calculate the unit rates of items purchased from the grocery store. For example, if 2 pounds of flour cost \$3.00, how much does flour cost per pound?
2. Have your child determine the amount of ingredients needed when cooking. For example, if a recipe calls for 8 cups of rice to serve 4 people, how many cups of rice do you need to serve 6 people?
3. Encourage your child to stick with it whenever a problem seems difficult. This will help your child see that everyone can learn math.
4. Praise your child when he or she makes an effort, and share in the excitement when he or she solves a problem or understands something for the first time.

# Parent ROADMAP

to  
California Common  
Core  
Standards  
6th Grade



*The way we taught students in the past simply does not prepare them for the higher demands of college and careers today and in the future. Your school and schools throughout the country are working to improve teaching and learning to ensure that all children will graduate high school with the skills they need to be successful.*

## SUPPORTING YOUR CHILD IN GRADE 6 ENGLISH LANGUAGE ARTS

In grade six, students will read a range of challenging books, articles, and texts, and will be expected to demonstrate their understanding of the material by answering questions and contributing to class discussions.

In writing, students will continue to work on their use of language, sentence structure, and organization of ideas. They will also be expected to integrate information from different sources and respond to challenging content through written interpretation and analysis. Activities in these areas will include:

- Providing detailed summaries of texts
- Determining the theme of a text and how it is conveyed
- Describing how a particular story or play unfolds and how characters respond to plot developments
- Using a range of reading strategies to determine the meaning of unknown words as they are used in a text
- Comparing and contrasting various texts, including poems, stories, and historical novels
- Understanding the figurative and connotative (implied) meaning of words and phrases
- Identifying and evaluating specific claims or arguments in a text
- Supporting written claims or arguments with clear reasons and relevant evidence
- Producing clear and coherent writing appropriate to the task, purpose, and audience
- Participating in class discussions about various texts and topics
- Conducting short research projects to answer a question, drawing on several sources

### READING LITERATURE

#### Grade 6 Reading

- Students determine the theme or central idea of a text and how it is conveyed through particular details. Students also provide an objective summary of the text.
- Students explain how an author develops the point of view of the narrator or speaker in a text.

### READING FOR INFORMATION

#### Grade 6 Reading

- Students cite evidence from the text to support analysis of what the text says explicitly as well as inferences drawn from the text.
- Students integrate information presented in different media or formats (such as visually or through numbers) as well as in words to develop a coherent

#### Grade 6 Writing

- Students introduce a topic and develop the topic with relevant facts, definitions, concrete details, quotations, or other information.
- Students provide a concluding statement or section that follows from the information or explanation presented.
- Students organize ideas, concepts, and information using strategies such as definition, classification, comparison/contrast, and cause/effect.
- Students use appropriate transitions to clarify the relationships among ideas and concepts.
- Students use precise language and subject-specific vocabulary.

### *Helping your child learn outside of school*

1. Provide time and space for your child to read independently. This time should be free from distractions such as television.
2. Ask your child what topics, events, or activities he or she likes. Then look for books, magazines, or other materials about those topics that would motivate your child to read.
3. It is also helpful when your child sees other people reading at home. You could share what you have read.
4. Make time for conversation at home. Discuss current events, shared interests, and future aspirations for education and career.
5. Visit museums, zoos, theaters, historical sites, aquariums, and other educational places to help increase your child's exposure to new knowledge and vocabulary.
6. Use technology to help build your child's interest in reading. There are several websites where students can read books or articles online. The computer will help with words the student cannot read independently. Libraries also have computers students can use to access those sites. Feel free to ask a librarian or teacher for suggestions.

## SUPPORTING YOUR CHILD IN GRADE 6 MATHEMATICS

In grade six, your child will learn the concept of rates and ratios and use these tools to solve word problems. Students will work on quickly and accurately dividing multi-digit whole numbers and adding, subtracting, multiplying, and dividing multi-digit decimals. Students will extend their previous work with fractions and decimals to understand the concept of rational numbers—any number that can be made by dividing one integer by another, such as  $\frac{1}{2}$ , 0.75, or 2. Students will also learn how to write and solve equations—mathematical statements using symbols, such as  $20+x=35$ —and apply these skills in solving multi-step word problems. Activities in these areas will include:

- Understanding and applying the concepts of ratios and unit rates, and using the correct language to describe them (for example, the ratio of wings to beaks in a flock of birds is 2 to 1, because for every 2 wings there is 1 beak)
- Building on knowledge of multiplication and division to divide fractions by fractions
- Understanding that positive and negative numbers are located on opposite sides of 0 on a number line
- Using pairs of numbers, including negative numbers, as coordinates for locating or placing a point on a graph
- Writing and determining the value of expressions with whole-number exponents (such as  $15+3^2$ )
- Identifying and writing equivalent mathematical expressions by applying the properties of operations. For example, recognizing that  $2(3+x)$  is the same as  $6+2x$
- Understanding that solving an equation such as  $2+x=12$  means answering the question, “*What number does x have to be to make this statement true?*”
- Representing and analyzing the relationships between independent and dependent variables
- Solving problems involving area and volume

#### Grade 6 Mathematics

- Divide fractions by fractions using models and equations to represent the problem
- Solve word problems involving division of fractions by fractions