MATH NEWS

Fourth Grade Newsletter — Summer/Fall 2019

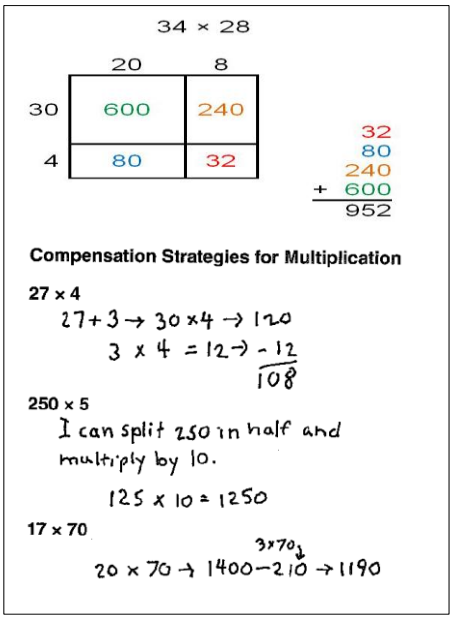
Math Tips for Families — Unit 2: Multiplication and Division

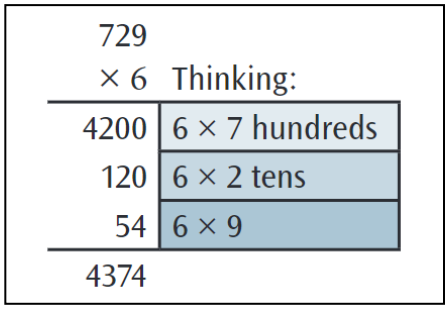
Throughout this unit, students will gain understanding and efficiency with multi-digit multiplication and then make the connection to division. Students will use various models for multiplying including equal-sized groups, arrays, and area models. By the end of this unit, students will also be able to apply knowledge of division, place value, and properties of operations.

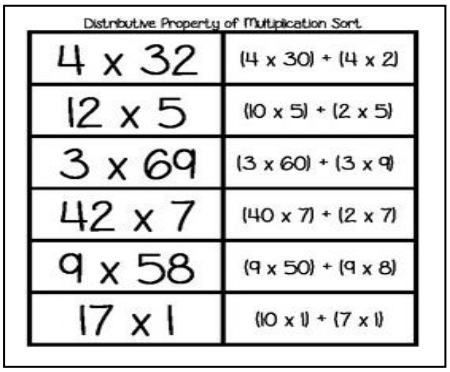
The standard algorithm is not used until sixth grade. At this level, students use conceptual models to develop place value understanding as they generate partial products and partial quotients. Students will use operations in word problems where they will need to interpret a remainder. In addition, students will recognize multiplication and division patterns and problem solve to find an unknown value.

Strategies for Multiplication:

Area Models, Partial Products, and Distributive Property







Words to Know:

Factor: a number that divides into a whole number easily

The factors of 24 are 1, 2, 3, 4, 6, 8, 12, and 24

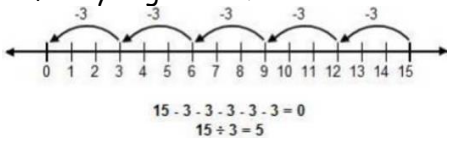
Multiple: a multiple of a number is the product of that number and any whole number

15 is a multiple of 5 because 3 x 5 = 15

Multiplication: the operation of repeated addition

2 + 2 + 2 = 2 x 3

Division: the operation of repeated subtraction. 15 ÷3 = 5 is the number of times you can subtract 3 from 15 before you get to 0.



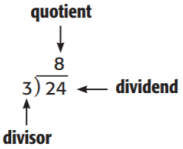
Product: the answer to a multiplication problem

24 is the product of 6 x 4

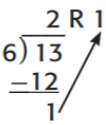
Quotient: the answer to a division problem

Dividend: a number that is being divided

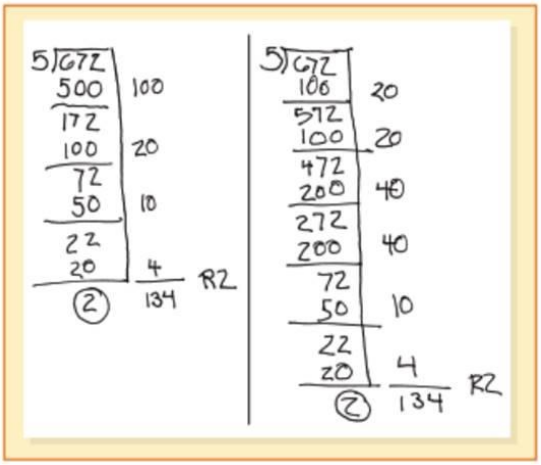
Divisor: the number by which the dividend is being divided

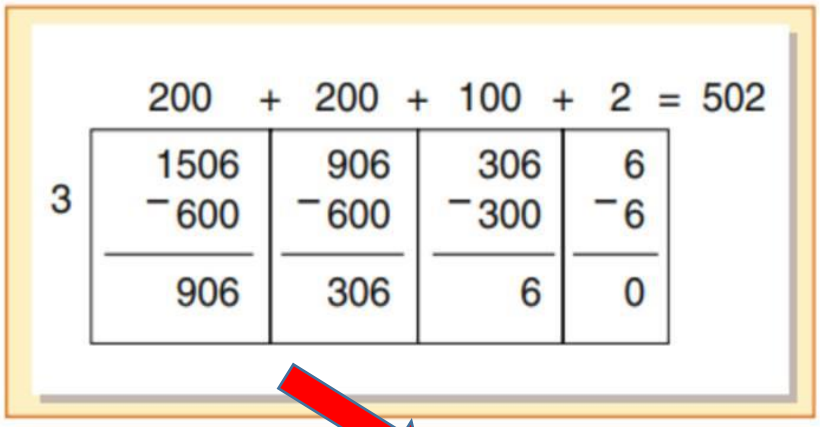


Remainder: the number that is left after one whole number is divided by another

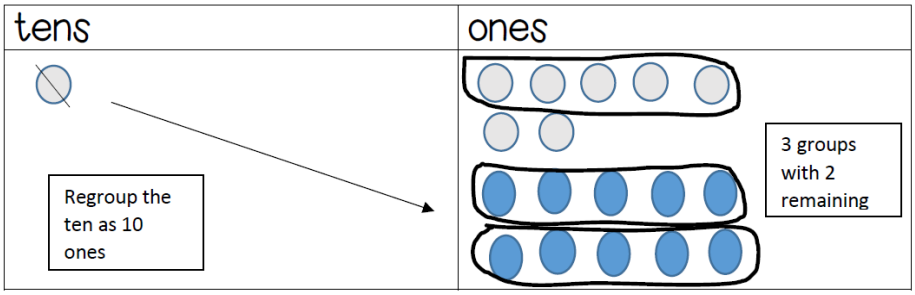


Strategies for Division: Partial Quotients, Area Models, and Place Value Chart





17 ÷ 5 = 3 r 2



Remember: Our focus in fourth grade is on conceptual understanding, so the standard algorithm of divide, multiply, subtract, and bring down should not be taught until sixth grade.

Key California Content Standards for this Unit

1. Use the four operations with whole numbers to solve problems
2. Gain familiarity with factors and multiples
3. Use strategies based on place value and the properties of operations to illustrate and explain calculations.
4. Understand properties of multiplication and the relationship between multiplication and division

Using Questions

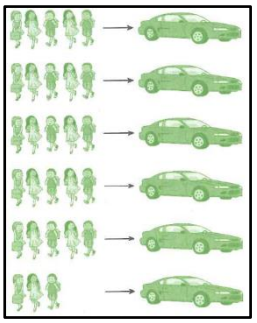
- What do you need to figure out? What is the problem about?
- What math words or steps do you use in class?
- What have you tried so far? What else can you try?
- Can you make a drawing or chart to help you think about the problem?
- Does your answer make sense?

How you can help at home:

- Play math games together (such as multiplication war with a deck of cards or with multiple dice)
- Continue to make real world connections

Example of a real world problem. *Common core math companion p. 37*

- *Twenty-eight students are going on the class picnic. Five students can ride in each car. How many cars will be needed for the trip?*



Use a visual model to "see" the situation.

Or …

Use an equation and reason.
28 ÷ 5 = 5 remainder 3
That means five cars can carry 25 students and another car will be needed to carry the other 3 students.

6 cars are needed in all.

Sources Used in this Newsletter:

- California Mathematics Framework and Content Standards
- Onlinemathlearning.com
- McGraw-Hill My Math
- Lafayette Parish School System: "All Hands on Deck with Math" Topic Newsletters https://www.lpssonline.com/site5579.php

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