Multiplication and Division in Word Problems
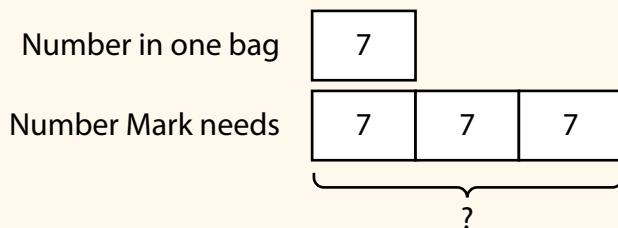
Dear Family,

This week your child is learning about multiplication and division in word problems.

Your child will be solving problems like the one below.

A card store sells bags of 7 markers. Mark needs 3 times that amount. How many markers does Mark need?

You can use a bar model to help understand the problem.

Number in one bag

7

Number Mark needs

7	7	7

?

Then you can use the bar model to write an equation to help understand the problem.

$3 \times$ number of markers in one bag $=$ total markers needed

$3 \times 7 = ?$

Then you can solve the equation.

$3 \times 7 = 21$

So, Mark needs 21 markers.

Invite your child to share what he or she knows about multiplication and division in word problems by doing the following activity together.

ACTIVITY MULTIPLICATION AND DIVISION IN WORD PROBLEMS

Do this activity with your child to explore using multiplication and division in word problems.

Materials number cube, 45 counters, such as pennies, beans, shells, or paper clips

- Have your child roll the number cube first. Your child takes that number of counters and records the number.
    Example: Your child rolls a 4 and takes 4 counters.

- Then you roll the number cube. This number tells you how many times the number of your child's counters you take.
    Example: You roll a 3. You take 3 times as many counters as your child.
              You take 12 counters.

- Have your child count to check the number of counters you get in all.
    Then have your child tell or write a comparison multiplication equation.
        Example: $3 \times 4 = 12$

- Finally, write a real-world story to match the multiplication equation.
        Example: Tess has 4 seashells. I have 3 times as many seashells as Tess.
                  I have 12 seashells.

- Repeat at least 6 times.

Divide Three-Digit Numbers

Dear Family,

This week your child is learning to divide three-digit numbers by one-digit numbers.

Your child is learning about division. He or she is also learning terminology related to division. You may hear your child use the terms dividend, divisor, and quotient. The **dividend** is the number being divided, the **divisor** is the number by which the dividend is divided, and the quotient is the result of the division. If the dividend is not a whole number multiple of the divisor, the amount left is called the remainder.

Your child is learning to divide a three-digit number by a one-digit number. One way your child can divide is by using an area model. With this strategy, your child divides by breaking apart the problem into smaller parts and using repeated subtraction. The problem below shows how to divide 138 by 6.
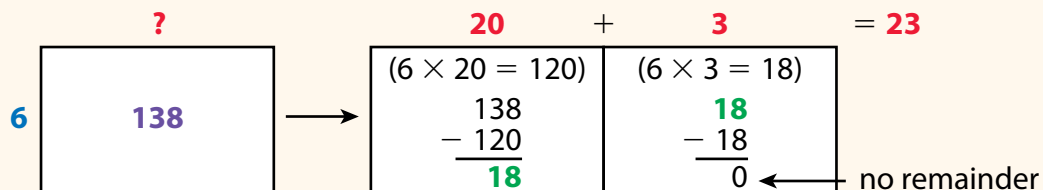
Altogether, there are 20 + 3, or 23, groups of 6 in 138, so **138 ÷ 6 = 23**.
Your child is also learning to check the answer by multiplying the quotient, **23**, by the divisor, **6**, to make sure that the product is equal to the dividend of 138.
Check: **23 × 6 = 138**, so the answer is correct.

Invite your child to share what he or she knows about dividing three-digit numbers by doing the following activity together.

ACTIVITY DIVIDING THREE-DIGIT NUMBERS

Do this activity with your child to divide three-digit numbers.

Materials book with a number of pages in the hundreds

- With your child, choose a favorite book and look at the number of pages it has.

- Tell your child that you want to read the entire book in 1 week. Ask your child to help you figure out how many pages you would need to read each day to finish the book in 1 week.

- Have your child use division to find the answer. For example, if the book has 157 pages, your child would divide 157 by 7. (157 ÷ 7 = 22 R 3, which means that there are 22 groups of 7 in 157 and a remainder of 3.)

- You and your child can check the answer to the division problem by using multiplication. If you have a remainder, remember to add the remainder to the product.

- Decide what to do if you have a remainder. Will you read one page each day for the number of days shown by the remainder, or will you read all the remaining pages on the last day?

- Repeat this activity with other favorite books at least three more times.

Divide Four-Digit Numbers

Dear Family,

This week your child is learning to divide four-digit numbers by one-digit numbers.

Your child is learning to divide a four-digit number by a one-digit number.

One way your child can solve a division problem is to find **partial quotients**. With this strategy, your child divides by breaking the dividend into parts.

Below shows one way to divide 2,113 by 4 by finding partial quotients.

```
        3
       25
      500
    4)2,113  ⟵── How many groups of 4 in 2,000? 500
    − 2,000  ⟵── Subtract 500 groups of 4.
        113  ⟵── How many groups of 4 in 100? 25
      − 100  ⟵── Subtract 25 groups of 4.
         13  ⟵── How many groups of 4 in 13? 3
       − 12  ⟵── Subtract 3 groups of 4.
          1
```

The partial quotients are **500**, **25**, and **3**. The remainder is **1**.

Altogether, there are **500** + **25** + **3**, or **528**, groups of 4 in 2,113, with 1 left over.

2,113 ÷ 4 = **528 R 1**

Invite your child to share what he or she knows about dividing four-digit numbers by doing the following activity together.

ACTIVITY DIVIDING FOUR-DIGIT NUMBERS

Do this activity with your child to divide four-digit numbers.

Materials 1 number cube (or dot cube)

• Have your child roll a number cube five times to make a division problem with a four-digit number and a one-digit number.

• The first four rolls form the four-digit number in the order of the rolls. The first roll is the thousands digit. The last roll is the divisor.

> *Example:* Your child rolls a 4, 2, 6, 1, and 3.
> The division problem is 4,261 ÷ 3.

• Have your child find the quotient. There may or may not be a remainder.

> *Example:* 4,261 ÷ 3 = 1,420 R 1

• Then you multiply to check your child's answer.

> *Example:* 3 × 1,420 = 4,260
> 4,260 + 1 = 4,261
> Your child's answer is correct!

• Switch roles and repeat the activity with you doing the division and your child using multiplication to check the answer.

• The player with the greater quotient wins the round.

• Play three rounds.