

# Unit 7

## Family Letter

Dear Family,

In this unit, *Division Strategies with Multi-Digit Dividends*, your child will estimate quotients, use partial quotients to divide 2-digit and multi-digit dividends, and interpret remainders.

### STEM Career Kid for this Unit

**Hi, I'm Finn.**

I want to be a construction manager. I will use math in my job when I supervise construction projects. I'll show students how I will use division strategies when I equally divide supplies among workers.



### What math terms will your child use?

Term	Student Understanding
dividend	A number or amount that is being divided up
divisor	The number that you divide by
quotient	The answer after you divide one number by another

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### What can your child do at home?

Have your child use division to split collections of objects around your home into equal groups. Each dividend (number of items being split) should be a 2-, 3-, or 4-digit number. For example, ask your child to divide 144 beads into 6 equal groups.

# What Will Students Learn in This Unit?

## Dividing Multiples of 10, 100, and 1,000

Your child will learn how to use basic facts and place value to divide multiples of 10, 100, and 1,000.

*Example*

Divide 2,800 by 4 using the basic fact  $28 \div 4 = 7$  and place value patterns.

$$28 \div 4 = 7$$

$$28 \text{ hundreds} \div 4 = 7 \text{ hundreds}$$

$$2800 \div 4 = 700$$

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## Estimating Quotients

Your child will use compatible numbers to estimate quotients. Estimating quotients is useful for checking work and when exact quotients are not needed. For example, the quotient of  $4,823 \div 7$  can be estimated using  $4,900 \div 7$  based on the basic fact  $49 \div 7 = 7$ . Since  $4,900 \div 7 = 700$ , the estimated quotient of  $4,823 \div 7$  is 700.

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## Partial Quotients

Your child will use partial quotients to divide 2-, 3-, and 4-digit dividends. This strategy involves finding a partial answer (called a partial quotient) repeatedly until the dividend is 0 or the remainder is less than the divisor. Then the partial quotients are added to find the final quotient.

*Example:*

$$72 \div 3 = 24$$

3	72	← partial quotients
-	60	20
	12	4
-	12	← final quotient
	0	24

$$4,388 \div 2 = 2,194$$

2	4,388	2,000
-	4,000	100
	388	50
-	200	40
	188	4
-	100	2,194
	88	
-	80	
	8	
-	8	
	0	

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## Remainders

Your child will learn how to find and interpret remainders. When splitting objects into equal groups, a remainder indicates that there are objects left over. A remainder can be interpreted in different ways based on the context of the problem. Sometimes a remainder means that another group is necessary. For example, if packing 51 objects into boxes that hold 6 items each, 9 boxes are required. The division problem is  $51 \div 6 = 8$  remainder 3. So, 8 boxes will be full and one box will have 3 objects.