Grade 3

Connecting Division to Multiplication

Overarching Student Learning Goals In this unit, your child will work to build an understanding of the following:	Resources/Tasks to support your child at home.
Recognizing that multiplication are inverse operations. *How are the following questions alike and how are they different?* *a) Sean had 4 key rings with 5 keys on each. How many keys did he have?* *b) Sean had 20 keys and he wanted to put the same amount of keys on each of his 4 key rings. How many keys should he put on each?* Sample Answer: Both problems use the same numbers, and both models would look like this: ⊙ ⊙ ⊙ ⊙ Problem "a" is multiplication, because I know the number of groups and the number of items in each group. I do not know the total. Problem "b" is division, because I do know the total and the number of groups. I do not know the number of items in each group.	• Look for real-world examples of multiplication and division problems. Ask your child to identify whether it is multiplication or division and how they know. Always encourage your child to draw models to justify their thinking and to write equations to represent the problems with a symbol for the unknown. • Math Playground Video: Multiplication and Division https://bit.ly/2LsQYwb • Origo One Video: Related Multiplication and Division Facts https://bit.ly/2LOsVUA
Thinking about division situations in terms of multiplication. Sara knows that 4 x 9 = 36. How can she use that fact to find the answer to the following problem? 36 markers are divided equally between 9 students. How many markers will each student get? Write a division equation and explain your reasoning.	• When presenting your child with a division problem, try to ask problems related to multiplication facts they are already familiar with. Ask them to identify a multiplication fact that could help them find the missing number of groups or items in each group.

For more information on the learning goals and your child's progress, please contact your child's teacher.

Writing missing factor multiplication equations to represent division equations, and using known multiplication facts to solve division equations.

Sara had 45 jellybeans. She gave the same number of jellybeans to each of her 9 friends. How many jellybeans did each friend get?

Is this a multiplication or a division problem?
> Sample Answer: It is a division problem. We are trying to figure out how many to put in each group.

Write an equation for solving the problem. Use a symbol to represent the unknown value.
> Sample Answer: $45 \div 9 = $?

Write a missing factor multiplication equation that could be used to help you solve this problem.

> Sample Answer: $9 \times $? $ = 45$

There are 24 gum balls in a jar, each party bag is to have 4 gum balls in it. How many party bags can be made?

Hmmm….how many groups of 4 will make 24 gumballs? I know that 6 x 4=24…So, it must be 6 party bags! 24÷4=6

- When your child is presented with division problems, ask them to represent the problem with a division equation and as a multiplication equation with an unknown factor. This will encourage your child to think about how they can use multiplication facts to efficiently solve division problems.

- LearnZillion Video: Interpreting Division as an Unknown Factor Problem Using Arrays https://bit.ly/2Ls9QuY

- Khan Academy Video: Relating Division to Multiplication https://bit.ly/2LqRwT1

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