At Home Math:
Multiplication and Division Activities for Grades 2-5

How Did You Solve That? For all of the activities listed below, as well as work your child's teacher may be assigning, ask your child to tell you about how they are thinking about multiplying and dividing. If their strategies are unfamiliar to you, listen carefully to your child's explanation; you might even try their approaches to solve a problem or two yourself. Let your child be the teacher! By explaining their thinking, students increase their understanding of multiplication and division.

Grade 2 Activities

Skip Counting Look for opportunities to practice skip counting by 2s, 5s, and 10s. Count together and see how high you can go. You can help your child see everyday examples of this skill by counting items such as shoes, fingers, or feet. Pose questions about situations that involve equal groups. For example: *"When we are with the whole family, how many fingers are there?" "If you have 8 pairs of socks, how many socks do you have?"*

Drawing Buildings Using your home or a familiar building, your child can count the number of rooms on 1 floor. Draw this floor and label what the different rooms are. Then ask questions such as, *"If there are 2 floors in this building that have the same number of rooms, how many rooms would there be?" "How many rooms would there be on 3 floors?"*

Making Buildings Use building blocks or Legos to make a building. Make the first floor of the building using one block to represent each room. Discuss how many rooms there are and what the different rooms could be. Use the same number of blocks to make a second floor that is exactly the same size and shape as the first. Make the building higher by adding floors. Each floor should have the same number of rooms. As you add each floor, count the total number of rooms in the building. Write down the total number of rooms for 1 floor, 2 floors, 3 floors, and so on. Ask, *"What do you notice about how the total number of rooms changes?"* **Animal Legs** Choose an animal that your child likes (e.g., cats), and make a table about the number of cats and their legs. Start with 1 cat and fill in how many legs 1 cat has. Then add another cat and fill in the total number of legs that 2 cats have. Continue the table and discuss the pattern that

emerges. See whether your child can determine the total number of legs each time a cat is added.

Cats	Legs
1	4
2	8
3	12
4	?

Grade 3 Activities

Skip Counting One way to explore multiplication is by skip counting. You can work on skip counting with your child by asking questions such as the following:

- What number would we land on if we counted by 3s (3, 6, 9, and so on) and everyone in our family said one number?
- What would happen if we counted by 3s and everyone had two turns? How many people would have to count by 3s to reach 27? You can count off by 3s to check.

Things That Come in Groups Things that come in equal groups is one way to think about multiplication. Some examples are shown below:

Eggs come in a carton of 12.
Spiders have 8 legs.

Juice boxes come in packages of 3.
Cars have 4 tires.

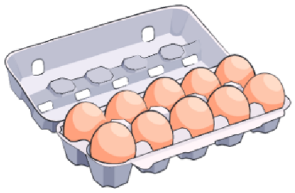
Make a list of what kinds of things come in groups and how many come in a group. Are there some numbers for which many examples exist? Are there some that are very hard to find? For example, "*What comes in groups of 7?*" Ask your child to consider multiple groups of items on your list. For example, discuss with your child: "*We said juice boxes come in packs of 3. How many juice boxes would there be if we had 5 packs?*"

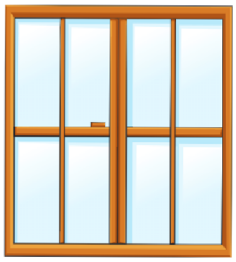
Multiplication and Division Problems in Everyday Situations Encourage your child to solve multiplication and division situations involving equal groups that come up in your daily activities such as:

- How many legs are on the six birds we saw out the window?
- How many toes are on eight people?
- If we share this batch of cookies equally, how many cookies will each person in our family get?

Grade 4 Activities

Array Search Look for items around your house that are packaged or arranged in rectangular arrays (things that are arranged in rows and columns): tiles on the floor, eggs in a carton, windowpanes, a six-pack of juice cans, and so on. Talk with your child about the dimensions (number of rows and columns) and discuss ways to figure out the total number of items.

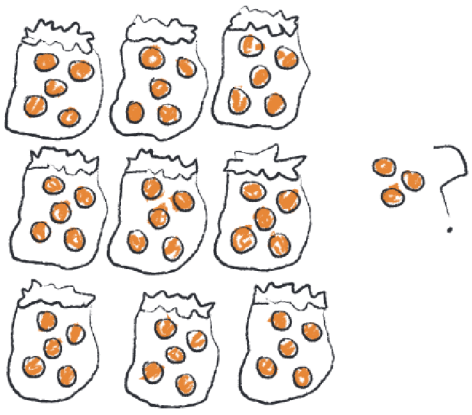




Arranging Chairs Ask your child to work on the following problem: "*Suppose you have 40 chairs. You want to arrange them into straight rows for an audience to watch a play. You need to arrange the chairs so that there will be the same number in every row. How many different ways could you do this? (What if you start with 50 chairs? 75? 72? 71?)"*

Everyday Multiplication and Division Situations Encourage your child to help you solve multiplication and division problems that come up in your daily activities.
Here are some examples:

- Suppose we had 7 cartons of eggs. There are 12 eggs in each carton. How many eggs would we have?
- We saw 23 cars go by our house in one hour, if the same number of cars went by every hour, how many cars would go by in 6 hours? In 12 hours?
- I baked a batch of 48 cookies for the bake sale. I need to put them into bags of 5. How many bags of 5 can I make? What can I do with the extra cookies?



Grade 5 Activities

Estimating Anytime you need to estimate amounts at home, try to involve your child. Look for ways to count or estimate large numbers of things, like floor tiles or windowpanes, or the number of cookies you'll need to make. Encourage your child to think of different ways to figure out about how many.

Modeling Division Situations Encourage your child to help you solve division problems that come up in your daily activities. For example, you might ask, *"If you can buy 2 pencils for 29 cents, about how many can you buy for $3.00?"* or *"I baked a batch of 137 muffins. I need to put them in bags of 5. How many bags can I fill with 5 muffins in each bag? Are there any left over? What should I do with the leftovers?"*

Multi-Step Problems Look for familiar and interesting situations that you can use as a basis for exploring multi-step problems with your child. Here is an example: *"If you sleep 8 hours per night on weeknights and 10 hours per night on weekends, how many hours do you sleep each week? Each month? Each year?"*

Estimating Large Products and Quotients Notice when you use multiplication and division in your everyday life and look for ways to estimate the answers with your child. Here is an example: *"If you usually read 35 pages each day, about how long will it take you to finish the book you are reading now? Will it take more than a week?"*