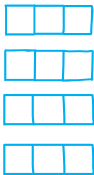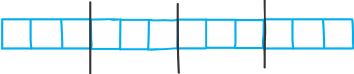# About the Mathematics in This Unit

Dear Family,

Our class is starting a new unit about multiplication and division called *Cube Patterns, Arrays, and Multiples of 10*. During this unit, students build on the work they did in Unit 1. Students identify and analyze arithmetic patterns to examine the relationship between multiplication and division, solve multiplication and division problems, consider what it means to multiply a single-digit number by a multiple of 10, and solve multi-step problems. They also learn the remaining multiplication facts.

Throughout the unit, students work toward these goals:

Benchmarks	Examples
Represent and explain the relationship between multiplication and division.	$4 \times 3 = 12$ $12 \div 3 = 4$ Sarah could split 12 into 4 equal groups which is division. Sarah could make 4 groups of 3 which is multiplication. They're related because they both involve Sarah splitting them into equal groups.
Solve multiplication and division word problems and write equations to represent problems.	There are 45 students from Grade 3 at the Ernest School who are going on a field trip. There are 9 chaperones. How many students will go with each chaperone? $45 \div 9 = $ _____
Solve division problems (2-digit number divided by single-digit number).	$42 \div 6 = $ _____ $6 \times 6 = 36$ $6 \times 1 = 6$ $36 + 6 = 42$ $6 + 1 = 7$

About the Mathematics in This Unit

Benchmarks	Examples
Demonstrate fluency with multiplication facts to 10×10.	7×8 8×7 Start with $\underline{\ 5 \times 8 = 40\ }$
Multiply a single-digit number by a multiple of 10 (up to 90).	Elena sells marbles in her toy store. Elena orders five 90-packs of marbles from The Toy Factory for her store. How many marbles does she order? $5 \times 90 = 450$
Solve multi-step problems involving multiplication and addition.	Zhang is organizing a birthday celebration. He orders eight 7-packs of balloons and three 90-packs of marbles for the celebration. How many items does he order? $8 \times 7 = 56$ $3 \times 90 = 270$ $56 + 270 = 326$

This unit is the second of three units in Grade 3 that focus on multiplication and division. Later this year, students solve multiplication and division problems with larger numbers and learn their division facts.

In our math class, students spend time discussing problems in depth and are asked to share their reasoning and solutions. It is most important that children accurately and efficiently solve math problems in ways that make sense to them. At home, encourage your child to explain his or her math thinking to you.

Please look for more information and activities about Unit 5 that will be sent home in the coming weeks.