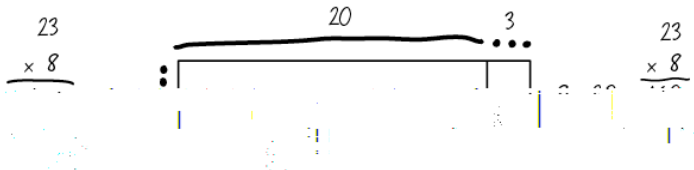


In this unit your child will:

- practice multiplication facts through 12's in the context of larger problems
- multiply 1-, 2-, and 3-digit numbers by multiples of 10, 100, and 1,000
- learn several different methods for multiplying 2-digit and 3-digit numbers by 1-digit and 2-digit numbers
- evaluate these methods with an eye to using the one that is the most efficient and effective given the situation and the numbers involved
- estimate products of single-digit and double-digit multiplication combinations
- write and solve story problems that involve multi-digit multiplication

Your child will learn and practice these skills by solving problems like those shown below. Keep this sheet for reference when you're helping with homework.

<p>Write the answer to each problem below.</p> $\begin{array}{r} 37 \\ \times 10 \\ \hline 370 \end{array}$ $\begin{array}{r} 12 \\ \times 30 \\ \hline 360 \end{array}$ $\begin{array}{r} 400 \\ \times 20 \\ \hline 8000 \end{array}$ $\begin{array}{r} 2,000 \\ \times 70 \\ \hline 14,000 \end{array}$	<p>Students are able to multiply fluently by multiples of 10, 100, and 1,000 when they know their basic facts and when they have a solid understanding of place value. Being able to calculate mentally with multiples of 10 is useful in and of itself, and also helps students estimate reasonable answers before multiplying multi-digit numbers.</p>
<p>Make a labeled sketch to solve this problem:</p> 	<p>Sketches help students see why different strategies, including the algorithms, work. Algorithms are important because when they are used accurately and with understanding, they are reliable, efficient, and universally applicable. Difficulties arise when students attempt to use an algorithm for multiplying without having mastered the basic facts, when they don't understand why the algorithm works, when they forget the steps, or when they can carry out the steps yet are unable to use their estimation skills to judge whether their final answer is reasonable. The understanding of number relationships that students develop by using sketches ensures that they will be able to use the algorithms correctly.</p>

