

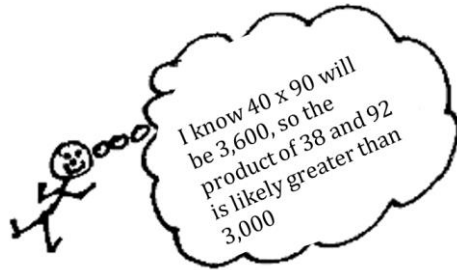
Multiplying Multi-Digit Numbers Parent Unit Summary

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.																								
<p>Explain how the standard algorithm for multiplication of multi-digit numbers connects to place value and prior multiplication strategies.</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <p>Area Model</p> <table style="border-collapse: collapse; margin: 0 auto;"> <tr> <td></td> <td style="padding: 5px;">50</td> <td style="padding: 5px;">2</td> <td></td> </tr> <tr> <td style="padding: 5px;">10</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">10 × 50 500</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">10 × 2 20</td> <td></td> </tr> <tr> <td style="padding: 5px;">6</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">6 × 50 300</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">6 × 2 12</td> <td></td> </tr> </table> <p style="font-size: small; margin-top: 10px;">Distributive Property (10 × 50) + (10 × 2) + (6 × 50) + (6 × 2) 500+20+300+12 832</p> </div> <div style="text-align: center;"> <p>Partial Products</p> <table style="margin: 0 auto;"> <tr><td style="padding: 0 5px;">10 × 50 =</td><td>500</td></tr> <tr><td style="padding: 0 5px;">10 × 2 =</td><td>20</td></tr> <tr><td style="padding: 0 5px;">6 × 50 =</td><td>300</td></tr> <tr><td style="padding: 0 5px;">6 × 2 =</td><td>12</td></tr> <tr><td colspan="2" style="padding: 5px 0 5px 20px;">+ 12</td></tr> <tr><td colspan="2" style="border-top: 1px solid black; padding: 5px 0 5px 20px;">832</td></tr> </table> </div> <div style="text-align: center;"> $\begin{array}{r} 52 \\ \times 16 \\ \hline 312 \\ + 520 \\ \hline 832 \end{array}$ </div> </div>		50	2		10	10 × 50 500	10 × 2 20		6	6 × 50 300	6 × 2 12		10 × 50 =	500	10 × 2 =	20	6 × 50 =	300	6 × 2 =	12	+ 12		832		<ul style="list-style-type: none"> Use at least 2 different strategies to find the product of 34×23. How do the different strategies relate? Look at this strategy that was started how does it connect to the standard algorithm for multiplication? <div style="text-align: center; margin: 10px 0;"> </div> <ul style="list-style-type: none"> Khan Academy Video: Connecting the Area Model to the standard algorithm for multiplication https://goo.gl/84RB2X
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<p>Use the standard algorithm for multiplication of multi-digit numbers.</p> <p>Find the product:</p> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 20px;"> <div style="text-align: center;"> $\begin{array}{r} 423 \\ \times 79 \\ \hline \end{array}$ </div> <div style="text-align: center;"> $\begin{array}{r} 4 \quad 5 \\ 346 \\ \times 92 \\ \hline 692 \\ 31140 \\ \hline 31,832 \end{array}$ </div> </div>	<ul style="list-style-type: none"> Provide multiple opportunities for your child to practice: <div style="display: flex; justify-content: space-around; margin: 10px 0;"> <div style="text-align: center;">$\begin{array}{r} 376 \\ \times 8 \end{array}$</div> <div style="text-align: center;">$\begin{array}{r} 26 \\ \times 28 \end{array}$</div> <div style="text-align: center;">$\begin{array}{r} 263 \\ \times 37 \end{array}$</div> <div style="text-align: center;">$\begin{array}{r} 9,246 \\ \times 14 \end{array}$</div> <div style="text-align: center;">$\begin{array}{r} 35,082 \\ \times 62 \end{array}$</div> </div> <p>Have your child describe the steps to the standard algorithm with place value. Example: 376×8, "First I multiply 6 ones and 8 ones to get 48. Since there are 4 tens in 48, I'll regroup them to the tens place..."</p> <ul style="list-style-type: none"> Khan Academy Video: Using the standard algorithm for multi-digit multiplication https://goo.gl/NnfzOL 																								

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

Use estimation to determine the reasonableness of products.

Will 38×92 be more than or less than 3,000?



- The shirt store sells shirts in whole dollar amounts starting at \$5.00. If you were going to buy 82 of the same t-shirts for the 5th grade class and you could spend up to \$1100, what is the most you could spend on one shirt?

- Use estimation to explain how you know there is an error in the equation below:

$$32 \times 84 = 393$$

- Khan Academy Video: Example of using estimation to find a near product <https://goo.gl/YCg538>