Directions:

Daily Directions

Read directions for the topic and follow the examples.

Students should complete approximately 1-2 sections per day

Contact Information:

Teacher Contact Information

School Contact Information
2.2 Addition Word Problems (DOK 2)

Addition Buzz Words

<table>
<thead>
<tr>
<th>Words Indicating Addition</th>
<th>Example</th>
<th>Add</th>
</tr>
</thead>
<tbody>
<tr>
<td>and</td>
<td>6 and 8</td>
<td>6 + 8</td>
</tr>
<tr>
<td>increased</td>
<td>The original price of $15 increased by $5.</td>
<td>$15 + $5</td>
</tr>
<tr>
<td>more</td>
<td>3 coins and 8 more</td>
<td>3 + 8</td>
</tr>
<tr>
<td>more than</td>
<td>Josh has 10 points. Will has 5 more than Josh</td>
<td>10 + 5</td>
</tr>
<tr>
<td>plus</td>
<td>8 baseballs plus 4 baseballs</td>
<td>8 + 4</td>
</tr>
<tr>
<td>sum</td>
<td>the sum of 3 and 5</td>
<td>3 + 5</td>
</tr>
<tr>
<td>total</td>
<td>the total of 10, 14, and 15</td>
<td>10 + 14 + 15</td>
</tr>
<tr>
<td>all together</td>
<td>2 bows plus 2 bows. How many all together?</td>
<td>2 + 2</td>
</tr>
<tr>
<td>in all</td>
<td>3 marbles plus 3 marbles. How many in all?</td>
<td>3 + 3</td>
</tr>
</tbody>
</table>

Example 1: Bradley’s father has a car with an odometer reading of 114,267. (An odometer measures the number of miles the car has traveled.) His mother’s SUV has an odometer reading of 68,293. How many miles do the two vehicles have in all? Find the numbers in the problem that should be added together: 114,267 and 68,293.

\[
\begin{align*}
\text{114,267} \\
\text{Add them together.} & \quad + \text{68,293} \\
\text{182,560}
\end{align*}
\]

The sum of the two odometer readings is 182,560.

Solve the following problems. Write your answer on the lines. (DOK 2)

1. Aaron read that there is a team of scientists who counted 43,289 species of insects in one state park and 24,590 in another state park. How many species of insects has the team counted in the two parks in all?

2. Chloe read in the newspaper that the city she lives in has an extra $567,000 dollars left to spend. The city closest to hers has an extra $113,400 to spend. How much money do the two cities have left to spend in all?
3. Michael’s pedometer says he walked 7,651 steps on Saturday and 4,399 steps on Sunday. How many steps did he walk in all on Saturday and Sunday?

4. A bird migrated 512 miles south in the fall and 524 miles north in the spring. How many miles did the bird migrate round trip?

5. A large bakery makes 12,340 loaves of bread and 111,048 donuts each week. How many loaves of bread and donuts does the bakery make each week in all?

6. A rancher grew 345,000 pounds of beef last year and 289,525 pounds of beef this year. How many pounds of beef did the rancher grow in all for last year and this year?

7. A farmer is growing 710,500 pounds of carrots and 146,835 pounds of squash this year. How many pounds of carrots and squash is the farmer growing in all this year?

8. Mrs. Winkle is a 4th grade teacher who likes to ‘do the math’. She estimates that she gives homework assignments that will require her to correct 68,580 math problems and 32,432 English problems each school year. How many math and English problems does Mrs. Winkle correct each school year in all?

9. The school librarian estimates there are 475,000 pages of fiction and 519,535 pages of non-fiction in the school library. How many pages of fiction and non-fiction pages are there in all?

10. Mr. Allen has a savings account with a balance of $12,050 and a checking account with a balance of $2,087. What is the sum of Mr. Allen’s two bank accounts?

11. A florist has 30,000 roses and 22,345 other blooms for Valentine’s Day. How many flowers does the florist have in all?

12. A grocery store has 152 bottles of ketchup, 392 bottles of BBQ sauce, and 153 bottles of mustard. How many bottles of ketchup, BBQ sauce, and mustard does the grocery store have in all?

13. A circus ordered 4,500 balloons, and a festival ordered 3,245 balloons from the same balloon factory. How many balloons did the circus and festival order in all?
2.3 Subtracting Whole Numbers (DOK 1)

Find the difference.  \( 54 - 28 = \square \)

**Step 1:** Rewrite vertically (↑) and define columns

\[
\begin{array}{c|c}
\text{Tens} & \text{Ones} \\
\hline
5 & 4 \\
- & 2 \quad 8 \\
\hline
\end{array}
\]

**Step 2:** Subtract each column. Begin with the ones column. Can you take 8 ones away from 4 ones? No! To subtract in the ones column, we have to borrow 10 ones or 1 group of ten from the tens column. Now we can begin to subtract!

\[
\begin{array}{c}
\underline{\phantom{4}} \\
\underline{5^1 \, 4} \\
\underline{\phantom{4}} \\
\underline{\phantom{4}} \\
\underline{\phantom{4}} \\
\end{array}
\]

Bring over the 1 you borrowed to make 14.

**Step 3:** \( \underline{28} \)

**Step 4:** Subtract 8 from 14 in the ones column.

\[
\begin{array}{c}
\underline{4} \\
\underline{5^1 \, 4} \\
\underline{\phantom{4}} \\
\underline{\phantom{4}} \\
\underline{\phantom{4}} \\
\end{array}
\]

**Step 5:** Subtract 2 from 4 the tens column.

\[
\begin{array}{c|c}
\text{Tens} & \text{Ones} \\
\hline
4 & 14 \\
\underline{8^1 \, 4} \\
\underline{\phantom{8^1 \, 4}} \\
\underline{\phantom{8^1 \, 4}} \\
\underline{\phantom{8^1 \, 4}} \\
\end{array}
\]

**Answer:** 26

Find the difference. (DOK 1)

\[
\begin{array}{c|c|c|c}
1. & 3,589 & -1,207 & \hline \\
3. & 601,540 & -309,232 & \hline \\
5. & 33,405 & \hline \\
2. & 45,609 & -12,987 & \hline \\
4. & 106,552 & -100,101 & \hline \\
6. & 278,088 & -105,378 & \hline \\
\end{array}
\]
<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>7.</td>
<td>267,158</td>
<td>14.</td>
</tr>
<tr>
<td></td>
<td>-253,269</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>22,564</td>
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<td></td>
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<tr>
<td>9.</td>
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<td>82,516</td>
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<td>-9,008</td>
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<td>12.</td>
<td>84,012</td>
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<tr>
<td></td>
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<tr>
<td>13.</td>
<td>106,901</td>
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</tr>
<tr>
<td></td>
<td>-79,562</td>
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<td>21.</td>
<td>421,367</td>
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</table>
### 2.4 Subtraction Word Problems (DOK 2)

#### Subtraction Buzz Words

<table>
<thead>
<tr>
<th>Words Indicating Subtraction</th>
<th>Example</th>
<th>Subtract</th>
</tr>
</thead>
<tbody>
<tr>
<td>decreased</td>
<td>$16$ decreased by $5$</td>
<td>$16 - 5$</td>
</tr>
<tr>
<td>difference</td>
<td>the difference between $18$ and $6$</td>
<td>$18 - 6$</td>
</tr>
<tr>
<td>less</td>
<td>$14$ days less $5$</td>
<td>$14 - 5$</td>
</tr>
<tr>
<td>less than</td>
<td>Jose completed $2$ laps less than Mike’s $9$</td>
<td>$9 - 2$</td>
</tr>
<tr>
<td>left</td>
<td>Ray sold $15$ out of $35$ tickets. How many did he have left?</td>
<td>$35 - 15$</td>
</tr>
<tr>
<td>lower than</td>
<td>This month’s rainfall is $2$ inches lower than last month’s rainfall of $8$ inches</td>
<td>$8 - 2$</td>
</tr>
<tr>
<td>minus</td>
<td>$15$ minus $6$</td>
<td>$15 - 6$</td>
</tr>
<tr>
<td>remain</td>
<td>Gary ate $4$ of $12$ cookies. How many remain?</td>
<td>$12 - 4$</td>
</tr>
</tbody>
</table>

**Example:** The Clement family picked $780$ strawberries at the Freckle Face Strawberry Farm. By the time they got them home, only $632$ remained. How many strawberries did the family snack on while driving home?

Find the numbers in the problem, and subtract the smaller number from the larger.

The two numbers are $780$ and $632$.

\[
\begin{array}{c}
780 \\
- 632 \\
\hline
148
\end{array}
\]

The number of strawberries the Clement family ate on the way home is $148$.

**Solve the following problems. Write your answer on the lines. (DOK 2)**

1. Jack gathered $23,567$ leaves while raking the lawn. His dog, Spike, ran through the pile of leaves and scattered $2,091$ out of the pile. How many leaves are left in the pile?
2. Mr. Smith bought a used car two years ago when the odometer (an odometer tracks the number of miles a car has been driven) read 115,602 miles. The odometer currently reads 161,742 miles. How many miles has Mr. Smith driven since he purchased the car?

3. Jacob was given an old penny collection of his grandfather’s. There are 12,563 pennies in the collection. Jacob gives 3,450 of the pennies to his younger sister. How many pennies did Jacob keep?

4. Isabella and her family eat one bag of potato chips each week. With 52 weeks in a year, they eat about 4,680 potato chips a year. If Isabella eats 765 of those potato chips each year, how many potato chips do the rest of her family eat each year?

5. Roberto spends 300 minutes a week practicing on his guitar. This comes to 15,600 minutes each year. So far this year, Roberto has practiced 8,385 minutes. How many more minutes will Roberto practice on his guitar the rest of this year?

6. The school bus Aiden rides on travels 6,336 miles a school year taking students to and from school. The bus has 5,142 miles left to go this school year. How many miles has the bus driven so far this school year?

7. Emily harvested 884 jalapeno peppers from her garden. Emily and her mother canned 794 of the peppers to use this winter. How many of the peppers were not canned?

8. Albert and his brothers collect seashells to make things to sell at their yard sale. All together they collected 1,659 seashells. They used 1,542 of the seashells on crafts to sell. How many of the seashells were not used?

9. An antique car from 1934 has 328,119 miles on it. When Mr. Morales first bought the car, it had 321,940 miles on it. How many miles has Mr. Morales driven the car?

10. An astronomer (a scientist who studies the stars) found 271,546 stars in a certain section of the galaxy. Another astronomer found 270,998 in the same section of the galaxy. What is the difference in the number of stars the two astronomers counted?
Chapter 3
Multiplying Whole Numbers


3.1 Practicing Multiplication (DOK 1)

You were introduced to the multiplication table in second grade. Use the table below to practice your “times table” for five minutes every school night until you have all of them memorized. You will use the problems on this multiplication table for the rest of your life to multiply digits of larger numbers.

To find the answers on the table below, take one number from the shaded column and one number from the shaded row. Follow the two numbers to where they meet in the table to find the answer. To find $6 \times 7 = 42$, find row 6 in the shaded column. Find column 7 in the shaded row. Now, follow row 6 until you find the number under column 7. The answer is 42.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
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<td>9</td>
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<td>36</td>
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<td>60</td>
<td>70</td>
<td>80</td>
<td>90</td>
<td>100</td>
</tr>
</tbody>
</table>

Multiplication Table

Row Numbers

Column Numbers
Find the product. Try to solve these problems from memory. For each problem you get incorrect, use the multiplication table from the previous page to find the correct answer, and then memorize the problem and the answer. Write your answers on the lines. (DOK 1)

1. $8 \times 3 =$ ______
2. $9 \times 2 =$ ______
3. $6 \times 4 =$ ______
4. $5 \times 8 =$ ______
5. $1 \times 10 =$ ______
6. $4 \times 3 =$ ______
7. $7 \times 2 =$ ______
8. $6 \times 8 =$ ______
9. $3 \times 6 =$ ______
10. $10 \times 2 =$ ______
11. $9 \times 9 =$ ______
12. $4 \times 8 =$ ______
13. $3 \times 2 =$ ______
14. $9 \times 10 =$ ______
15. $6 \times 6 =$ ______
16. $3 \times 8 =$ ______
17. $5 \times 5 =$ ______
18. $9 \times 4 =$ ______
19. $2 \times 8 =$ ______
20. $4 \times 4 =$ ______
21. $7 \times 6 =$ ______
22. $8 \times 5 =$ ______
23. $6 \times 5 =$ ______
24. $8 \times 4 =$ ______
25. $7 \times 9 =$ ______
26. $2 \times 6 =$ ______
27. $1 \times 7 =$ ______
28. $4 \times 5 =$ ______
29. $7 \times 8 =$ ______
30. $3 \times 9 =$ ______
31. $2 \times 8 =$ ______
32. $8 \times 8 =$ ______
33. $5 \times 9 =$ ______
3.2 Multiplying Multi-Digit Whole Numbers (DOK 2)

Example: Multiply: $24 \times 35$

**Step 1:** Line up the ones digits. Multiply $24 \times 5$.

\[
\begin{array}{c}
24 \\
\times \ 35 \\
\hline
120 \\
\frac{4}{\text{Bring down the } 1 \text{ that was carried.}}
\end{array}
\]

- $4 \times 5 = 20$. Write the 0 and carry the 2.
- $2 \times 5 = 10$. Add the 2 that was carried to get 12. Write the 2 and carry the 1.

**Step 2:** Multiply $24 \times 3$. Remember to shift the product one place to the left. Then add.

\[
\begin{array}{c}
24 \\
\times \ 35 \\
\hline
120 \\
72 \\
\hline
840 \\
\text{Add.}
\end{array}
\]

- $4 \times 3 = 12$. Write the 2 and carry the 1.
- $2 \times 3 = 6$. Add the 1 that was carried to get 7. Write the 7.

**Answer:** The answer is 840.

Example: Multiply $3,508 \times 2$.

\[
\begin{array}{c}
3,508 \\
\times \ 2 \\
\hline
7,016
\end{array}
\]

The answer is 7,016.
Multiply the problems below. Show your work. (DOK 2)

1. \[ 18 \times 23 \]
2. \[ 44 \times 37 \]
3. \[ 58 \times 12 \]
4. \[ 1,326 \times 4 \]
5. \[ 4,512 \times 8 \]

6. \[ 67 \times 64 \]
7. \[ 52 \times 79 \]
8. \[ 36 \times 81 \]
9. \[ 4,008 \times 6 \]
10. \[ 3,032 \times 5 \]
11. \[ 92 \times 35 \]
12. \[ 48 \times 61 \]
13. \[ 2,682 \times 3 \]
14. \[ 6,897 \times 1 \]
15. \[ 2,691 \times 3 \]
16. \[ 57 \times 21 \]
17. \[ 15 \times 42 \]
18. \[ 3,011 \times 2 \]
19. \[ 3,588 \times 2 \]
20. \[ 4,610 \times 7 \]
Chapter 3 Multiplying Whole Numbers

21. $1,021 \times 8$

22. $68 \times 17$

23. $4,803 \times 2$

24. $56 \times 79$

25. $2,950 \times 3$

26. $1,930 \times 5$

27. $99 \times 23$

28. $1,811 \times 5$

29. $1,962 \times 4$

30. $83 \times 35$

31. $82 \times 34$

32. $1,507 \times 6$

33. $57 \times 44$

34. $3,251 \times 3$

35. $74 \times 26$

36. $54 \times 18$

37. $3,300 \times 3$

38. $1,098 \times 7$

39. $92 \times 24$

40. $1,743 \times 5$
Chapter 3 Multiplying Whole Numbers

3.3 Multiplication Using Area Models (DOK 2, 3)

Example: Fill in the missing numbers in the area model below. Use the model to solve the multiplication problem $24 \times 16$.

\[
\begin{array}{c|c}
20 & 4 \\
\hline
10 & 200 \\
6 & 24 \\
\end{array}
\]

Step 1: Multiply the numbers in the first column. $20 \times 10 = 200$ is done for you. On the second row, $20 \times 6$ is blank. $20 \times 6 = 120$. Write 120 in the box.

Step 2: Multiply the numbers in the second column. On the first row, $4 \times 10$ is blank. $4 \times 10 = 40$. Fill in the 40 in the box. The second row is done for you: $4 \times 6 = 24$.

Step 3: Add all the numbers inside the boxes to solve the problem:

\[
\begin{align*}
200 \\
40 \\
120 \\
\hline
\end{align*}
\]

\[\begin{align*}
\_ + 24 \\
\hline
384 \\
\end{align*}\]

Answer: 384

Solve the multiplication problems using area models below. (DOK 2)

1. $18 \times 12$

\[
\begin{array}{c|c}
10 & 8 \\
\hline
10 & 80 \\
2 & 20 \\
\end{array}
\]

2. $25 \times 32$

\[
\begin{array}{c|c|c}
20 & 5 \\
\hline
30 & 600 \\
2 & 10 \\
\end{array}
\]
Chapter 3 Multiplying Whole Numbers

3. $44 \times 23$

<table>
<thead>
<tr>
<th></th>
<th>40</th>
<th>4</th>
</tr>
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<tbody>
<tr>
<td>20</td>
<td>800</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>12</td>
<td></td>
</tr>
</tbody>
</table>

5. $91 \times 16$

<table>
<thead>
<tr>
<th></th>
<th>90</th>
<th>1</th>
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</thead>
<tbody>
<tr>
<td>10</td>
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</tr>
<tr>
<td>8</td>
<td>540</td>
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4. $37 \times 14$

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<tbody>
<tr>
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<td>70</td>
</tr>
<tr>
<td>4</td>
<td>120</td>
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6. $52 \times 11$

<table>
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<tr>
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<th>50</th>
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<tr>
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<td>20</td>
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</table>

For problems 7 and 8, two methods of multiplication are used. For each problem, one method has an error in it. Find the error and explain what should be done to correct it. (DOK 3)

7. $49 \times 23 =$

**Method A**

<table>
<thead>
<tr>
<th></th>
<th>40</th>
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<tr>
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<td>800</td>
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<tr>
<td>3</td>
<td>150</td>
<td>27</td>
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</table>

**Method B**

$800$
$180$
$150$
$\text{+ 27}$
$1,157$

8. $67 \times 71 =$

**Method A**

<table>
<thead>
<tr>
<th></th>
<th>60</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>70</td>
<td>4,200</td>
<td>490</td>
</tr>
<tr>
<td>1</td>
<td>60</td>
<td>7</td>
</tr>
</tbody>
</table>

**Method B**

$4,200$
$490$
$60$
$\text{+ 7}$
$4,757$

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