

NAME _____

Module 2 Whole Number Operations
Lesson 3 Large Numbers: Multiplication

Independent Practice

2.3

Estimate before multiplying.

1. 511×5
 $\approx 2,500$
 $= 2,555$

2. 909×7
 $\approx 6,300$
 $= 6,363$

3. 297×6
 $\approx 1,800$
 $= 1,782$

4. 489×4
 $\approx 2,000$
 $= 1,956$

5. 302×91
 $\approx 27,000$ or $30,000$
 $= 27,482$

6. 790×38
 $\approx 32,000$
 $= 30,020$

Solve using the Partial Products Method.

7. Marion's field hockey team has 26 players. If each player has 15 fans attend the game, how many fans are there all together?

390 fans

8. A new housing development has 57 houses. Each house is landscaped with 21 shrubs. How many shrubs are planted in all?

1,197 shrubs

9. The school library has 65 racks for books. If each rack has 11 shelves, how many shelves are there in all?

715 shelves

10. A grid is formed using 48 columns and 31 rows. How many squares are formed in the grid?

1,488 squares

11. There are 281 trucks in the fleet. If each truck has 18 wheels, how many wheels are there in all?

5,058 wheels

12. There are 219 classes at the local university. Each class has 23 students enrolled. How many students are there all together?

5,037 students

Solve using the Standard Multiplication Method with or without manipulatives.

13. 64×18
1,152

14. 78×43
3,354

15. 77×68
5,236

16. 132×22
2,904

17. 205×35
7,175

18. 419×56
23,464

Solve.

19. Use each of the digits 1, 3, 6, and 8 once to make the largest possible product.

$$\begin{array}{r} \square\square\square \\ \times \square \\ \hline \end{array}$$

631
× 8
5,048

20. Use each of the digits 3, 4, 6, and 7 once to make the smallest possible product.

$$\begin{array}{r} \square\square\square \\ \times \square \\ \hline \end{array}$$

467
× 3
1,401

Journal

1. Explain how to estimate the product of 37 and 203.
2. Multiply 37×203 using the Partial Products Method of multiplying. Explain the procedure.
3. Multiply 18×388 using the traditional algorithm for multiplication. Explain the procedure.

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Cumulative Review

Add each of the following.

1.
$$\begin{array}{r} 6,347 \\ + 185 \\ \hline 6,532 \end{array}$$

2.
$$\begin{array}{r} 1,055 \\ 2,428 \\ + 5,672 \\ \hline 9,155 \end{array}$$

Subtract each of the following.

3.
$$\begin{array}{r} 486 \\ - 229 \\ \hline 257 \end{array}$$

4.
$$\begin{array}{r} 977 \\ - 565 \\ \hline 412 \end{array}$$

Solve each of the following.

5. During one card game, Kelsey scored 1,145 points for the first hand; 2,008 points for the second hand; and 984 points for the third hand. How many points did Kelsey score in all?
4137 points

6. If Martin climbed 1,245 feet up a slippery slope and slid back down 766 feet, how many feet would he still be up the slope?
479 feet

7. Last year, there were 4,201 students enrolled at Kara's school. This year, the enrollment increased by 274 students. How many students are enrolled in Kara's school this year?
4475 students

8. John is walking on a trail that is 1,758 feet long. He already has walked 855 feet. How many more feet does he have left to walk?
903 feet

9. Jules found a computer that she wanted to buy that cost \$2,032. Her father found one at a second hand store that cost \$1,450. How much more does the computer cost that Jules wants to buy?
\$582

10. An office supply store sold calculators for three weeks. The number sold for each week is shown below:
- | |
|-----|
| 542 |
| 137 |
| 459 |

What is the total number of calculators sold in those three weeks?
1,138 calculators

Possible Journal Answers

1. Round 37 to 40. Round 203 to 200. Multiply 40×200 . The estimated product is 8,000.
2. Multiply each partial product and then find the sum of all of the partial products.

$$\begin{array}{r} 203 \\ \times 37 \\ \hline 6,000 = 30 \times 200 \\ 90 = 30 \times 3 \\ 1,400 = 7 \times 200 \\ \underline{21} = 7 \times 3 \\ 7,511 \end{array}$$

OR

$$\begin{array}{r} 203 \\ \times 37 \\ \hline 21 = 7 \times 3 \\ 1400 = 7 \times 200 \\ 90 = 30 \times 3 \\ \underline{6000} = 30 \times 200 \\ 7,511 \end{array}$$

3. The larger number, 388, goes on top of the multiplication problem. First, multiply 388×8 . Next, multiply 388×10 . Last, add the two partial products together:
 $3,104 + 3,880 = 6,984$.

$$\begin{array}{r} 388 \\ \times 18 \\ \hline 3108 \\ \underline{3880} \\ 6,984 \end{array}$$