

Name _____

Multiply Using Partial Products

I Can use different strategies such as place value and partial products to multiply by a 1-digit number.

Florida's B.E.S.T.

- Number Sense & Operations 4.NSO.2.2, 4.NSO.2.5, 4.NSO.2.1
- Mathematical Thinking & Reasoning MTR.3.1, MTR.4.1, MTR.5.1



UNLOCK the Problem Real World

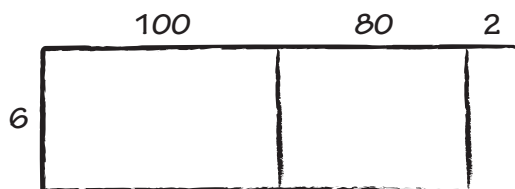
How can you use what you know about the Distributive Property to break apart numbers to find products of 3-digit and 1-digit numbers?

Use place value and partial products.

Multiply. 6×182 Estimate. $6 \times 200 =$ _____

STEP 1

SHADE THE MODEL

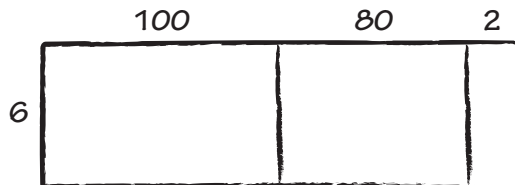


THINK AND RECORD

$$\begin{array}{r} 182 \\ \times 6 \\ \hline \end{array}$$

→ Multiply the hundreds.
 $6 \times 1 \text{ hundred} = 6 \text{ hundreds}$

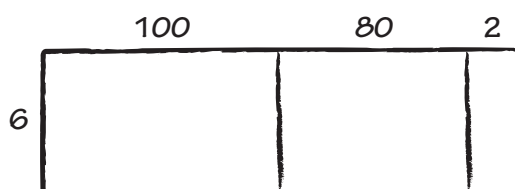
STEP 2



$$\begin{array}{r} 182 \\ \times 6 \\ \hline 600 \\ \hline \end{array}$$

← Multiply the tens.
 $6 \times 8 \text{ tens} = 48 \text{ tens}$

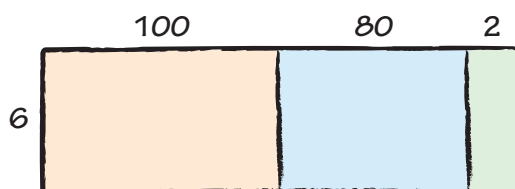
STEP 3



$$\begin{array}{r} 182 \\ \times 6 \\ \hline 600 \\ 480 \\ \hline \end{array}$$

← Multiply the ones.
 $6 \times 2 \text{ ones} = 12 \text{ ones}$

STEP 4



$$\begin{array}{r} 182 \\ \times 6 \\ \hline 600 \\ 480 \\ + 12 \\ \hline \end{array}$$

← Add the partial products.

So, $6 \times 182 = 1,092$. Since 1,092 is close to the estimate of 1,200, it is reasonable.

Math Talk

MTR 3.1 Complete tasks with mathematical fluency.

How can you use the Distributive Property to find 4×257 ?

Example

Use place value and partial products.

Multiply. $2 \times 4,572$ Estimate. $2 \times 5,000 =$ _____

$$\begin{array}{r} 4,572 \\ \times \quad 2 \\ \hline \\ \\ \\ + \\ \hline \end{array}$$

← 2×4 thousands = 8 thousands

← 2×5 hundreds = 1 thousand

← 2×7 tens = 1 hundred 4 tens

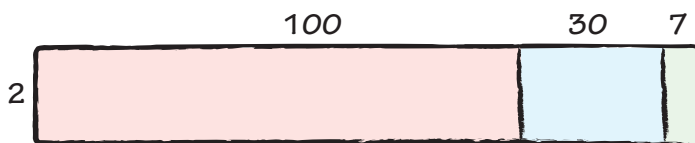
← 2×2 ones = 4 ones

← Add the partial products.

Share and Show

Math Board

1. Use the model to find 2×137 .



$$\begin{array}{r} 137 \\ \times \quad 2 \\ \hline \\ + \\ \hline \end{array}$$

Estimate. Then record the product.

2. Estimate: _____

$$\begin{array}{r} 190 \\ \times \quad 3 \\ \hline \\ + \\ \hline \end{array}$$

✓ 3. Estimate: _____

$$\begin{array}{r} 471 \\ \times \quad 4 \\ \hline \\ + \\ \hline \end{array}$$

✓ 4. Estimate: _____

$$\begin{array}{r} \$3,439 \\ \times \quad 7 \\ \hline \\ + \\ \hline \end{array}$$

Math Talk

MTR 3.1 Complete tasks with mathematical fluency.

Explain how using place value and expanded form makes it easier to find products.

On Your Own**Estimate. Then record the product.**

5. Estimate: _____

$$\begin{array}{r}
 \$53 \\
 \times \quad 4 \\
 \hline
 \\
 + \\
 \hline
 \end{array}$$

6. Estimate: _____

$$\begin{array}{r}
 \$473 \\
 \times \quad 9 \\
 \hline
 \\
 + \\
 \hline
 \end{array}$$

7. Estimate: _____

$$\begin{array}{r}
 608 \\
 \times \quad 6 \\
 \hline
 \\
 + \\
 \hline
 \end{array}$$

Practice: Copy and Solve Estimate. Then record the product.

8. 2×78

9. $2 \times \$210$

10. $9 \times \$682$

11. $8 \times 8,145$

MTR Find the missing digit.

12.
$$\begin{array}{r}
 \square 5 \\
 \times \quad 7 \\
 \hline
 455
 \end{array}$$

13.
$$\begin{array}{r}
 248 \\
 \times \quad 3 \\
 \hline
 \square 44
 \end{array}$$

14.
$$\begin{array}{r}
 \$395 \\
 \times \quad \square \\
 \hline
 \$2,370
 \end{array}$$

15.
$$\begin{array}{r}
 3,748 \\
 \times \quad 4 \\
 \hline
 1\square,992
 \end{array}$$

16. A store bought 9 cases of light bulbs in May and 8 cases in June. There are 48 light bulbs in a case. How many light bulbs did the store buy in May and June?

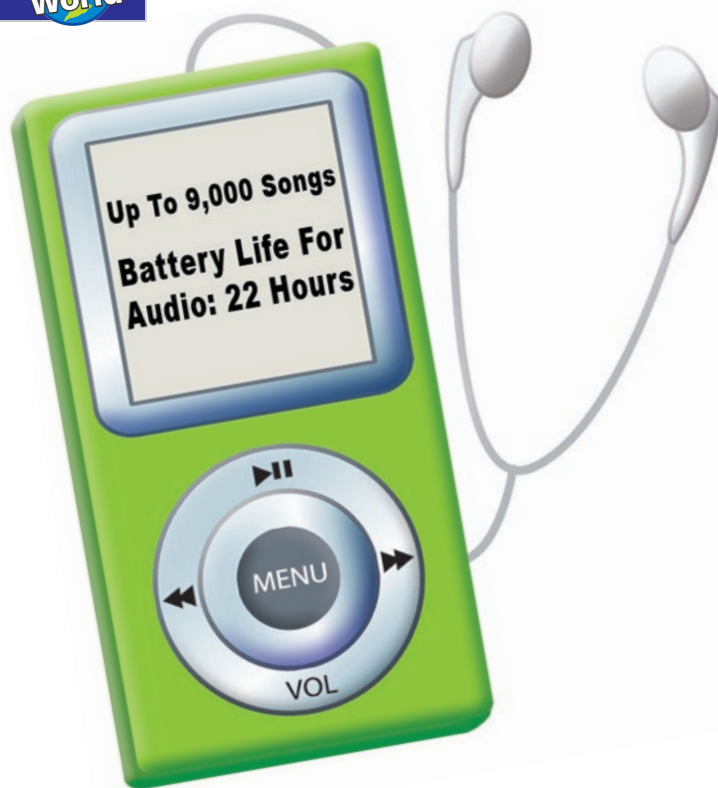
17. Mr. Yilmaz saved \$2,500 to buy airline tickets for his family. He bought 6 airline tickets for \$372 each. How much of the money he saved does Mr. Yilmaz have after he buys the tickets?

18. Coach Ramirez bought 8 cases of bottled water for a road race. There are 24 bottles in each case. After the race, 34 bottles of water were left. How many bottles were used at the race? Explain.

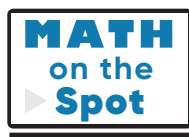
Problem Solving · Applications

19. **MTR** Look at the picture. Kylie has 832 songs on her portable media player. Lance has 3 times as many songs. How many fewer songs can Lance add to his player than Kylie can add to hers?
-

20. Denzel wants to buy the new portable media player shown. He has 5 times as many songs as Merlyn. Merlyn has 1,146 songs. Will all of his songs fit on the portable media player? How many songs does Denzel have?
-



21. The sum of a 3-digit number and a 1-digit number is 217. The product of the numbers is 642. If one number is between 200 and 225, what are the numbers?
-



22. Mrs. Mohammed bought 6 gallons of juice for a party. Each gallon has 16 cups. After the party, 3 cups of juice were left over. At the party, how many cups did people drink? Show your work and explain how you found your answer.
-
-
-
-

Show the Math

Demonstrate Your Thinking

Multiply Using Partial Products

Go Online

Interactive Examples

Estimate. Then record the product.

1. Estimate: 1,200

$$\begin{array}{r} 243 \\ \times 6 \\ \hline 1,200 \\ 240 \\ + 18 \\ \hline 1,458 \end{array}$$

2. Estimate: _____

$$\begin{array}{r} 640 \\ \times 3 \\ \hline \end{array}$$

3. Estimate: _____

$$\begin{array}{r} \$149 \\ \times 5 \\ \hline \end{array}$$

4. Estimate: _____

$$\begin{array}{r} 721 \\ \times 8 \\ \hline \end{array}$$

5. Estimate: _____

$$\begin{array}{r} 293 \\ \times 4 \\ \hline \end{array}$$

6. Estimate: _____

$$\begin{array}{r} \$416 \\ \times 6 \\ \hline \end{array}$$

7. Estimate: _____

$$\begin{array}{r} 961 \\ \times 2 \\ \hline \end{array}$$

8. Estimate: _____

$$\begin{array}{r} 837 \\ \times 9 \\ \hline \end{array}$$

Problem Solving



9. A maze at a county fair is made from 275 bales of hay. The maze at the state fair is made from 4 times as many bales of hay. How many bales of hay are used for the maze at the state fair?

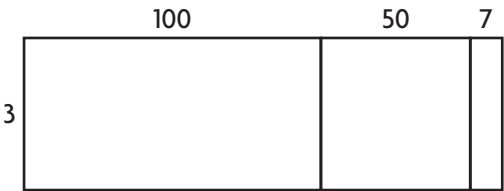
10. Pedro gets 8 hours of sleep each night. How many hours does Pedro sleep in a year with 365 days?

11. **WRITE** *Math* Explain how you can find 4×754 using two different methods.

Lesson Check

12. A passenger jet flies at an average speed of 548 miles per hour. At that speed, how many miles does the plane travel in 4 hours?

13. Use the model to find 3×157 .



Spiral Review

14. The school fun fair made \$1,768 on games and \$978 on food sales. How much money did the fun fair make on games and food sales?

15. Use the table below.

State	Population
North Dakota	646,844
Alaska	698,473
Vermont	621,760

List the states from least to greatest population.

16. A National Park covers 218,375 acres. What is this number written in expanded form?

17. Last year a business had profits of \$8,000. This year its profits are 5 times as great. What are this year's profits?

