

Homework & Practice 4-8

Multiply 2-Digit Numbers by Multiples of 10

Another Look!

Find 30×26 by breaking one of the factors apart.

You can find 30×26 two different ways.



Break 26 into tens and ones.

$$26 = 20 + 6$$

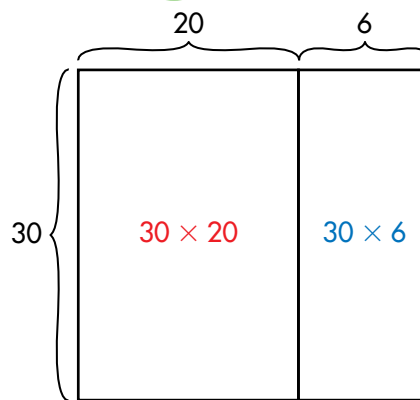
Multiply to find the partial products.

$$30 \times 20 = 600 \text{ and } 30 \times 6 = 180$$

Add the partial products.

$$600 + 180 = 780$$

So, $30 \times 26 = 780$.



Find 30×26 using a pattern.

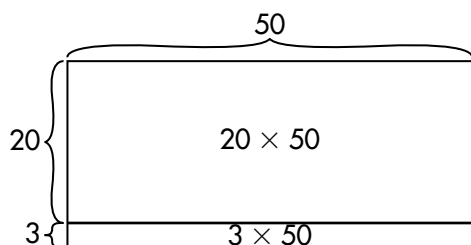
$$\begin{array}{r}
 ^1 \\
 26 \\
 \times 30 \\
 \hline
 780
 \end{array}$$

Record 0 in the ones place of the product.
Then find 3 tens \times 26.

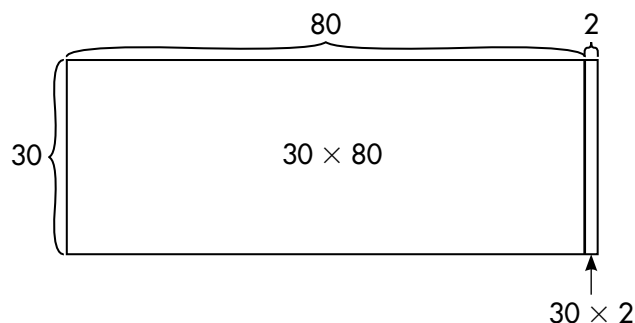
$$\begin{aligned}
 30 \times 26 &= 30 \times (20 + 6) \\
 &= (30 \times 20) + (30 \times 6) \\
 &= 600 + 180 \\
 &= 780
 \end{aligned}$$

For 1-2, use the area model to find each product.

1. 23×50



2. 30×82



For 3-10, use a pattern to find each product.

3.
$$\begin{array}{r}
 75 \\
 \times 70 \\
 \hline
 \square, \square \square 0
 \end{array}$$

4.
$$\begin{array}{r}
 93 \\
 \times 50 \\
 \hline
 \square, \square \square 0
 \end{array}$$

5.
$$\begin{array}{r}
 66 \\
 \times 20 \\
 \hline
 \square, \square \square 0
 \end{array}$$

6.
$$\begin{array}{r}
 53 \\
 \times 40 \\
 \hline
 \square, \square \square 0
 \end{array}$$

7. 32×20

8. 82×80

9. 60×14

10. 50×52

11. **MP.2 Reasoning** How many fossil kits with 10 samples each have the same number of fossils as 30 fossil kits with 8 samples each?

12. Write 975,204 in expanded form.

13. Julie scored 10 baskets each game throughout the 11 game season. If each basket is worth 2 points, how many points did Julie make?

14. It costs \$20 for admission to the zoo. If a family of 12 wants to go to the zoo, what would it cost?

15. **Math and Science** School buses use diesel fuel, which is an efficient and clean form of petroleum. One school has 60 buses. Each school bus carries 34 students. If all of the school buses are full, how many students are on the school buses?

16. **Higher Order Thinking** Explain how you can solve 40×16 by breaking apart the factors.

Common Core Assessment

17. There are 12 boxes of books to put on shelves. Each box has 31 books. Each shelf holds 18 books. Kevin estimates he will need 20 shelves for all the books.



You can use rounding or compatible numbers to estimate.

Part A

Estimate the total number of books.

Part B

Write to explain if you agree with Kevin's estimate for 20 shelves.