Multiply 2-Digit Factors Using the Distributive Property

› WORKED EXAMPLE

STEP 1 Estimate the product.

52 × 36

Estimate: __50__ × __40__ = __2000__

STEP 2 Rename both factors.

$52 \times 36 = (\underline{50} + \underline{2}) \times (\underline{30} + \underline{6})$

$52 \times 36 =$

$(\underline{50} \times \underline{30}) + (\underline{50} \times \underline{6}) +$

$(\underline{2} \times \underline{30}) + (\underline{2} \times \underline{6})$

STEP 3 Find the partial products.

50 × 30 = 1500
50 × 6 = 300
2 × 30 = 60
2 × 6 = 12

STEP 4 Add the partial products.

50 × 30 = 1500
50 × 6 = 300
2 × 30 = 60
2 × 6 = 12
_____
1872

Is your answer reasonable? __yes__

› TRY IT

1

STEP 1 Estimate the product.

23 × 79

Estimate: _____ × _____ = _____

STEP 2 Rename both factors.

$23 \times 79 = (\underline{} + \underline{}) \times (\underline{} + \underline{})$

$23 \times 79 = (\underline{} \times \underline{}) + (\underline{} \times \underline{}) +$

$(\underline{} \times \underline{}) + (\underline{} \times \underline{})$

STEP 3 Find the partial products.

STEP 4 Add the partial products.

23 × 79 = _____

Is your answer reasonable? _____

› PRACTICE

2

STEP 1 Estimate the product.

47 × 88

Estimate: _____ × _____ = _____

STEP 2 Rename both factors.

$47 \times 88 = (\underline{} + \underline{}) \times (\underline{} + \underline{})$

$47 \times 88 = (\underline{} \times \underline{}) + (\underline{} \times \underline{}) +$

$(\underline{} \times \underline{}) + (\underline{} \times \underline{})$

STEP 3 Find the partial products.

STEP 4 Add the partial products.

47 × 88 = _____

Is your answer reasonable? _____

3

$$61 \times 69$$

Estimate: ____ × ____ = ____

$61 \times 69 = (\ \ + \ \ ) \times (\ \ + \ \ )$

$61 \times 69 = (\ \ \times \ \ ) + (\ \ \times \ \ ) +$

$\quad\quad\quad (\ \ \times \ \ ) + (\ \ \times \ \ )$

$61 \times 69 =$ ____

Is your answer reasonable? ____

4

$$38 \times 73$$

Estimate: ____ × ____ = ____

$38 \times 73 = (\ \ + \ \ ) \times (\ \ + \ \ )$

$38 \times 73 = (\ \ \times \ \ ) + (\ \ \times \ \ ) +$

$\quad\quad\quad (\ \ \times \ \ ) + (\ \ \times \ \ )$

$38 \times 73 =$ ____

Is your answer reasonable? ____

EXIT Ticket

> **Find the product.**

$$74 \times 28$$

$74 \times 28 = (\ \ + \ \ ) \times (\ \ + \ \ )$

$74 \times 28 = (\ \ \times \ \ ) + (\ \ \times \ \ ) +$

$\quad\quad\quad (\ \ \times \ \ ) + (\ \ \times \ \ )$

$74 \times 28 =$ ____

> **How is splitting two 2-digit factors similar to splitting rectangles to multiply?**

Splitting two 2-digit factors is similar to splitting rectangles to multiply because ____

____

____

____

SCORE ⓪ ① ②

TOPIC 3

TOPIC 2

TOPIC 1