LESSON MAKER PRO

Products in Parts

Use partial products to multiply.

GRADE 5 · 5.NOS.D.13.b

5.NOS.D.13.b "Apply and extend whole number multiplication strategies (e.g. area model, partial products)."

NAME _____ DATE _____

SPLIT AND MULTIPLY

Split each factor into tens and ones. Multiply every pair of parts, then add the partial products.

WORKED EXAMPLE

Use the area model to find the product.

	10	4
20	200	80
3	30	12

1. 20 × 10 = 200; 20 × 4 = 80
2. 3 × 10 = 30; 3 × 4 = 12
3. 200 + 80 + 30 + 12 = 322

Answer: 23 × 14 = 322

PRACTICE 4 problems

1 Use partial products to find 34 × 12.

ANSWER _____

2 Use partial products to find 26 × 15.

ANSWER _____

3 Use partial products to find 47 × 23.

ANSWER _____

4 Use partial products to find 58 × 16.

ANSWER _____

APPLY IT Show your work

1 A game shop arranges trading cards as shown in the area model. How many cards are there?



ANSWER _____

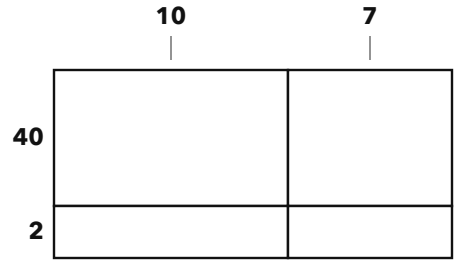
2 A video game has 48 levels. Each level has 25 coins. How many coins are in all?

WORK SPACE

ANSWER _____

CHALLENGE One step up

One pack has the number of badges shown in the area model. How many badges are in 3 packs? Show the partial products you use.



WORK SPACE AND ANSWER

ANSWER KEY

Products in Parts

GRADE 5 · 5.NOS.D.13.b

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Use partial products to find 34 × 12.	**408**
2	Use partial products to find 26 × 15.	**390**
3	Use partial products to find 47 × 23.	**1,081**
4	Use partial products to find 58 × 16.	**928**

PART 2 · APPLY IT

1. **864 cards** Add the partial products: 600 + 120 + 120 + 24 = 864.
2. **1,200 coins** Split 25 into 20 and 5. Then 48 × 20 + 48 × 5 = 960 + 240 = 1,200.

CHALLENGE

400 + 280 + 20 + 14 = 714 badges per pack; 714 × 3 = 2,142 badges.

Accept any correct partial-products split. For the challenge, students should show how they found the badges in one pack before multiplying by 3.