LESSON MAKER PRO

Parts Make Products

Use models and equations to multiply and divide.

GRADE 5 · 5.NOS.B.7.e

5.NOS.B.7.e "Represent and explain the computation by connecting concrete models, drawings, and/or equations to the meaning of multiplication and division."

NAME _____ DATE _____

THE BIG IDEA

An area model splits each factor into parts. Multiply the parts, then add the partial products. To check division, multiply the quotient by the divisor.

WORKED EXAMPLE

Use the area model to find 34 × 23.

	20	3
30	600	90
4	80	12

1. 30 × 20 = 600
2. 30 × 3 = 90; 4 × 20 = 80
3. 4 × 3 = 12
4. 600 + 90 + 80 + 12 = 782

Answer: 34 × 23 = 782

PRACTICE 4 problems

1 Write the partial products and find 26 × 14.

ANSWER _____

2 Write the partial products and find 18 × 32.

ANSWER _____

3 Find 168 ÷ 12. Write a multiplication equation to check.

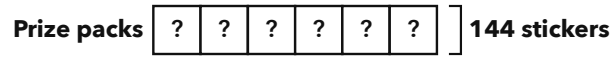
ANSWER _____

4 Find 252 ÷ 14. Write a multiplication equation to check.

ANSWER _____

APPLY IT Show your work

1 A club shares its stickers equally among 6 prize packs. How many stickers go in each pack? Write a division equation.



ANSWER _____

2 A team buys 28 shirts for $15 each. What is the total cost? Use partial products.

WORK SPACE

ANSWER _____

CHALLENGE One step up

A game shop puts 18 cards in each of 24 packs. It repacks all the cards into boxes of 12. How many boxes can it fill? Show a multiplication equation and a division equation.

WORK SPACE AND ANSWER

ANSWER KEY

Parts Make Products

GRADE 5 · 5.NOS.B.7.e

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Write the partial products and find 26 × 14.	**200 + 80 + 60 + 24 = 364**
2	Write the partial products and find 18 × 32.	**300 + 20 + 240 + 16 = 576**
3	Find 168 ÷ 12. Write a multiplication equation to check.	**168 ÷ 12 = 14; 14 × 12 = 168**
4	Find 252 ÷ 14. Write a multiplication equation to check.	**252 ÷ 14 = 18; 18 × 14 = 252**

PART 2 · APPLY IT

1. **144 ÷ 6 = 24; 24 stickers per pack** The tape shows 144 stickers split into 6 equal parts. Divide 144 by 6 to find one part.
2. **$420** Split 28 into 20 + 8 and 15 into 10 + 5. Add 200 + 100 + 80 + 40 to get $420.

CHALLENGE

18 × 24 = 432; 432 ÷ 12 = 36. It can fill 36 boxes.

Accept partial products in any order. For the division checks, accept either order of the factors.