LESSON MAKER PRO

Fraction Product Paths

Multiply fractions and find parts of whole amounts.

GRADE 5 · 5.NF.B.4a

CCSS.Math.Content.5.NF.B.4a "Interpret the product (a / b) × q as a parts of a partition of q into b equal parts; equivalently, as the result of a sequence of operations a × q ÷ b. For example, use a visual fraction model to show (2/3) × 4 = 8/3..."

NAME _____ DATE _____

PARTS OF PARTS

To find a/b x q, split q into b equal parts, then take a of those parts. You can also multiply the numerators and multiply the denominators. Simplify the product when possible.

WORKED EXAMPLE

Find 3/5 x 2/7.

1. Imagine a rectangle split into 5 rows and 7 columns, making 35 equal squares.
2. Shade 3/5 of the rows and 2/7 of the columns.
3. The 6 overlapping squares represent 6/35 of the rectangle.

Answer: 6/35

PRACTICE 6 problems

1 Find 4/9 x 18.

ANSWER _____

2 Find 8/11 x 22.

ANSWER _____

3 Find 9/10 x 4/13. Simplify.

ANSWER _____

4 Find 11/12 x 8/15. Simplify.

ANSWER _____

5 Find 13/16 x 8/13. Simplify.

ANSWER _____

6 Find 4/13 x 26.

ANSWER _____

APPLY IT Show your work

1 At robotics club, 13/14 of 28 battery packs are charged. How many battery packs are charged?

WORK SPACE

ANSWER _____

2 An art club paints 4/11 of a mural wall with a design. Blue paint will cover 8/9 of that design section. What fraction of the whole wall will be blue?

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

Find 23/24 x 12/23. In one sentence, explain why your answer makes sense.

_____

_____

ANSWER KEY

Fraction Product Paths

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PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Find 4/9 x 18.	**8**
2	Find 8/11 x 22.	**16**
3	Find 9/10 x 4/13. Simplify.	**18/65**
4	Find 11/12 x 8/15. Simplify.	**22/45**
5	Find 13/16 x 8/13. Simplify.	**1/2**
6	Find 4/13 x 26.	**8**

PART 2 · APPLY IT

1. **26 battery packs** Find 13/14 x 28. Divide 28 by 14 to get 2, then multiply 2 x 13 to get 26.
2. **32/99** Multiply 4/11 x 8/9. The product is 32/99, which cannot be simplified.

CHALLENGE

1/2, because the 23s cancel and 12 is half of 24.

Accept equivalent fraction products, but have students simplify when the prompt says to simplify. For the challenge, accept a correct one-sentence explanation that shows the product is 12/24, or 1/2.