

Fact Power Paths

Use groups, arrays, and related facts to solve.

GRADE 3 • 3.CE.2

3.CE.2 "The student will recall with automaticity multiplication and division facts through 10×10 ; and represent, solve, and justify solutions to single-step contextual problems using multiplication and division with whole numbers..."

NAME _____

DATE _____

USE FACTS TOGETHER

Multiplication tells how many are in equal groups. Division can split a total into equal groups, and you can use a multiplication fact to check a division fact.

WORKED EXAMPLE

Solve 4×7 .

1. Think of 4 equal groups of 7.

2. Add: $7 + 7 + 7 + 7 = 28$.

Answer: $4 \times 7 = 28$

PRACTICE 6 problems

1 $6 \times 5 = \underline{\quad}$

ANSWER _____

2 $54 \div 6 = \underline{\quad}$

ANSWER _____

3 Write both related division facts for $8 \times 5 = 40$.

ANSWER _____

4 Use a near-ten fact: $9 \times 6 = (10 \times 6) - \underline{\quad} = \underline{\quad}$.

ANSWER _____

5 A rectangle has 3 rows of 9 squares. Write a multiplication equation for the total number of squares.

ANSWER _____

6 Complete: $8 \times 6 = \underline{\quad} \times 8 = \underline{\quad}$.

ANSWER _____

APPLY IT Show your work

- 1** At a robotics club, each team has 6 mini flags. There are 8 teams. How many mini flags are there altogether?

WORK SPACE

ANSWER _____

- 2** Jada has 54 trading cards. She puts them equally on 6 album pages. How many cards go on each page?

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

A student says $6 \times 9 = 60$ because $6 \times 10 = 60$. Is the student correct? Explain how to find the correct product.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	$6 \times 5 = \underline{\quad}$	30
2	$54 \div 6 = \underline{\quad}$	9
3	Write both related division facts for $8 \times 5 = 40$.	$40 \div 8 = 5$; $40 \div 5 = 8$
4	Use a near-ten fact: $9 \times 6 = (10 \times 6) - \underline{\quad} = \underline{\quad}$.	6, 54
5	A rectangle has 3 rows of 9 squares. Write a multiplication equation for the total number of squares.	$3 \times 9 = 27$
6	Complete: $8 \times 6 = \underline{\quad} \times 8 = \underline{\quad}$.	6, 48

PART 2 • APPLY IT

1. **48 mini flags** Multiply the number of teams by the flags on each team: $8 \times 6 = 48$.
2. **9 cards** Divide the total cards into 6 equal groups: $54 \div 6 = 9$.

CHALLENGE

No. $6 \times 9 = 54$ because 6×9 is one group of 6 less than 6×10 , so $60 - 6 = 54$.

Accept multiplication equations with the factors switched, such as $9 \times 3 = 27$. For the challenge, accept any clear explanation that subtracts one group of 6 from 60.