

Equal Fact Detectives

Use related multiplication and division facts to find missing numbers.

GRADE 3 • MA.3.AR.2

MA.3.AR.2 "Develop an understanding of equality and multiplication and division."

NAME _____

DATE _____

BALANCE THE FACTS

An equation is balanced when each side has the same value. Multiplication and division are related facts, so you can use one fact to help find a missing number in the other fact.

WORKED EXAMPLE

Complete: $7 \times 8 = \underline{\quad}$ and $56 \div 7 = \underline{\quad}$

1. Multiply: $7 \times 8 = 56$.

2. Use the same fact to divide: $56 \div 7 = 8$.

Answer: $7 \times 8 = 56$; $56 \div 7 = 8$

PRACTICE 6 problems

1 $\underline{\quad} \times 4 = 36$

ANSWER _____

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

ANSWER _____

3 $\underline{\quad} \div 3 = 15$

ANSWER _____

4 $11 \times \underline{\quad} = 22$

ANSWER _____

5 $48 \div \underline{\quad} = 12$

ANSWER _____

6 $\underline{\quad} \times 10 = 60$

ANSWER _____

APPLY IT Show your work

- 1** A student has 45 crayons and puts the same number of crayons into 5 art boxes. How many crayons are in each box?

WORK SPACE

ANSWER _____

- 2** A collector puts 54 trading cards equally onto 6 album pages. How many cards go on each page?

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

The same number fills both blanks. What is the number? Explain how you know. $___ \times 5 = 45$ and $81 \div ___ = 9$

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	$\underline{\quad} \times 4 = 36$	9
2	$54 \div \underline{\quad} = 6$	9
3	$\underline{\quad} \div 3 = 15$	45
4	$11 \times \underline{\quad} = 22$	2
5	$48 \div \underline{\quad} = 12$	4
6	$\underline{\quad} \times 10 = 60$	6

PART 2 • APPLY IT

1. **9 crayons** Divide 45 crayons into 5 equal boxes. $45 \div 5 = 9$.
2. **9 cards** Divide 54 cards into 6 equal pages. $54 \div 6 = 9$.

CHALLENGE

$9 \cdot 9 \times 5 = 45$ and $81 \div 9 = 9$.

Accept a number alone or a completed equation for Part 1. For the challenge, accept 9 with a correct check of both equations.