

Equation Detective

Find the number that makes each equation true.

GRADE 3 • 3.OA.A.4

CCSS.Math.Content.3.OA.A.4 "Determine the unknown whole number in a multiplication or division equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations $8 \times ? = 48$, $5 = _ \div 3$."

NAME _____

DATE _____

FIND THE MISSING NUMBER

Use related multiplication and division facts to find x . Check your answer by putting it back into the equation and seeing if both sides are equal.

WORKED EXAMPLE

$$7 \times x = 56$$

1. Divide both sides by 7.

$$2. 56 \div 7 = 8.$$

$$3. x = 8.$$

Answer: $x = 8$

PRACTICE 6 problems

1 $3 \times x = 27$

ANSWER _____

2 $9 \times x = 54$

ANSWER _____

3 $45 \div 5 = x$

ANSWER _____

4 $5 = x \div 9$

ANSWER _____

5 $60 \div x = 10$

ANSWER _____

6 $11 \times x = 66$

ANSWER _____

APPLY IT Show your work

- 1** Lena has 45 stickers. She puts the same number of stickers on 5 album pages. How many stickers are on each page?

WORK SPACE

ANSWER _____

- 2** A class is building robot kits. Each kit needs 4 wheels, and the class has 36 wheels. How many robot kits can the class build?

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

A maker club has 54 beads. It puts them equally into 6 trays. Then it divides the beads in each tray equally among 3 projects. How many beads does each project get? Write two division equations and explain your reasoning.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	$3 * x = 27$	$x = 9$
2	$9 * x = 54$	$x = 6$
3	$45 / 5 = x$	$x = 9$
4	$5 = x / 9$	$x = 45$
5	$60 / x = 10$	$x = 6$
6	$11 * x = 66$	$x = 6$

PART 2 • APPLY IT

1. **9 stickers** Write $45 / 5 = x$. Since 45 divided by 5 is 9, there are 9 stickers on each page.
2. **9 robot kits** Write $4 * x = 36$. Since 36 divided by 4 is 9, the class can build 9 robot kits.

CHALLENGE

3 beads; $54 / 6 = 9$, then $9 / 3 = 3$. Each tray has 9 beads, and each project gets 3 beads.

Accept x written on either side of the equals sign. For the challenge, accept equivalent wording that shows both division steps and gives 3 beads.