

Division Detectives

Use multiplication to find each quotient.

GRADE 3 • 3.OA.B.6

CCSS.Math.Content.3.OA.B.6 "Understand division as an unknown-factor problem. For example, find $32 \div 8$ by finding the number that makes 32 when multiplied by 8."

NAME _____

DATE _____

FIND THE MISSING FACTOR

Division can be an unknown-factor problem. In a division equation, multiply the divisor by x to make the dividend. The factor that makes the dividend is the quotient.

WORKED EXAMPLE

$$48 \div 6 = x$$

1. Write the related multiplication fact: $6 \times x = 48$.
2. Find the factor: $6 \times 8 = 48$.
3. So, $x = 8$.

Answer: $48 \div 6 = 8$

PRACTICE 6 problems

1 $21 \div 3 = x$

ANSWER _____

2 $20 \div 5 = x$

ANSWER _____

3 4 times $x = 28$

ANSWER _____

4 $45 \div 9 = x$

ANSWER _____

5 7 times $x = 35$

ANSWER _____

6 $27 \div 3 = x$

ANSWER _____

APPLY IT Show your work

- 1** Jordan has 36 trading cards. Jordan puts the same number of cards on each of 4 pages. How many cards are on each page?

WORK SPACE

ANSWER _____

- 2** The art club has 63 beads. The beads are placed evenly into 9 bracelet kits. How many beads are in each kit?

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

Lina says $50 \div 5 = 9$ because $5 \times 9 = 45$. Is Lina correct? Write the correct quotient and a multiplication fact that proves it.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	$21 \div 3 = x$	$x = 7$
2	$20 \div 5 = x$	$x = 4$
3	4 times $x = 28$	$x = 7$
4	$45 \div 9 = x$	$x = 5$
5	7 times $x = 35$	$x = 5$
6	$27 \div 3 = x$	$x = 9$

PART 2 • APPLY IT

- 9 cards on each page** Find x in 4 times $x = 36$. Since $4 \times 9 = 36$, $x = 9$.
- 7 beads in each kit** Find x in 9 times $x = 63$. Since $9 \times 7 = 63$, $x = 7$.

CHALLENGE

No. $50 \div 5 = 10$ because $5 \times 10 = 50$.

Accept either “ $x =$ ” answers or the quotient alone for Part 1. For the challenge, accept any clear correction that includes 10 and a multiplication fact showing $5 \times 10 = 50$.