

Factor Switch

Turn division into a missing factor equation.

GRADE 3 • MA.3.AR.2.1

MA.3.AR.2.1 "Restate a division problem as a missing factor problem using the relationship between multiplication and division."

NAME _____

DATE _____

THE BIG IDEA

Division and multiplication are connected. To restate a division problem, put the divisor first in a multiplication equation, then use a blank for the missing factor. The product is the dividend.

WORKED EXAMPLE

$$42 / 7 = \underline{\quad}$$

1. Start with $42 / 7 = \underline{\quad}$.
2. Write $7 \times \underline{\quad} = 42$.
3. Find the factor that makes 42 when multiplied by 7.

Answer: $42 / 7 = 6$ because $7 \times 6 = 42$.

PRACTICE 6 problems

- 1** $20 / 4 = \underline{\quad}$. Write the matching missing factor equation.

ANSWER _____

- 2** $27 / 3 = \underline{\quad}$. Write the matching missing factor equation.

ANSWER _____

- 3** $32 / 4 = \underline{\quad}$. Write the matching missing factor equation.

ANSWER _____

- 4** $45 / 5 = \underline{\quad}$. Write the matching missing factor equation.

ANSWER _____

- 5** $64 / 8 = \underline{\quad}$. Write the matching missing factor equation.

ANSWER _____

- 6** $81 / 9 = \underline{\quad}$. Write the matching missing factor equation.

ANSWER _____

APPLY IT Show your work

- 1** A costume maker shares 45 beads equally among 5 bracelets. How many beads go on each bracelet? Write a division equation and restate it as a missing factor equation.

WORK SPACE

ANSWER _____

- 2** A game team puts 40 prize tickets equally into 8 envelopes. How many tickets go in each envelope? Write a division equation and restate it as a missing factor equation.

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

A craft club has 72 beads and puts them equally on 8 bracelets. Then the club uses 4 beads from each bracelet for a display. Write the division equation and the matching missing factor equation. How many beads remain on each bracelet?

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	$20 / 4 = \underline{\hspace{1cm}}$. Write the matching missing factor equation.	$4 \times \underline{\hspace{1cm}} = 20$; $\underline{\hspace{1cm}} = 5$
2	$27 / 3 = \underline{\hspace{1cm}}$. Write the matching missing factor equation.	$3 \times \underline{\hspace{1cm}} = 27$; $\underline{\hspace{1cm}} = 9$
3	$32 / 4 = \underline{\hspace{1cm}}$. Write the matching missing factor equation.	$4 \times \underline{\hspace{1cm}} = 32$; $\underline{\hspace{1cm}} = 8$
4	$45 / 5 = \underline{\hspace{1cm}}$. Write the matching missing factor equation.	$5 \times \underline{\hspace{1cm}} = 45$; $\underline{\hspace{1cm}} = 9$
5	$64 / 8 = \underline{\hspace{1cm}}$. Write the matching missing factor equation.	$8 \times \underline{\hspace{1cm}} = 64$; $\underline{\hspace{1cm}} = 8$
6	$81 / 9 = \underline{\hspace{1cm}}$. Write the matching missing factor equation.	$9 \times \underline{\hspace{1cm}} = 81$; $\underline{\hspace{1cm}} = 9$

PART 2 • APPLY IT

- $45 / 5 = 9$; $5 \times \underline{\hspace{1cm}} = 45$; 9 beads go on each bracelet.** Divide 45 beads into 5 equal groups. The matching multiplication equation is $5 \times \underline{\hspace{1cm}} = 45$, so the missing factor is 9.
- $40 / 8 = 5$; $8 \times \underline{\hspace{1cm}} = 40$; 5 tickets go in each envelope.** Divide 40 tickets into 8 equal groups. The matching multiplication equation is $8 \times \underline{\hspace{1cm}} = 40$, so the missing factor is 5.

CHALLENGE

$72 / 8 = 9$; $8 \times \underline{\hspace{1cm}} = 72$; 9 beads start on each bracelet, and 5 beads remain on each bracelet.

Accept equivalent multiplication equations only when the divisor is a factor and the dividend is the product, such as $4 \times \underline{\hspace{1cm}} = 20$. Students may write the solved factor in the blank or state it after the equation.