

Fact Family Builders

Use multiplication and division facts that belong together.

GRADE 3 • 3.CE.2.b

3.CE.2.b "Use inverse relationships to write the related facts connected to a given model for multiplication and division of whole numbers through 10×10 ."

NAME _____

DATE _____

BUILD A FACT FAMILY

When you know a multiplication fact, you can use the same three numbers to write related multiplication and division facts. Switch the factors for another multiplication fact, then divide the total by each factor.

WORKED EXAMPLE

Use 3, 8, and 24 to write the fact family.

1. Start with $3 \times 8 = 24$.
2. Switch the factors: $8 \times 3 = 24$.
3. Divide the total by 3: $24 \div 3 = 8$.
4. Divide the total by 8: $24 \div 8 = 3$.

Answer: $3 \times 8 = 24$; $8 \times 3 = 24$; $24 \div 3 = 8$; $24 \div 8 = 3$

PRACTICE 6 problems

- 1** An array has 2 rows with 6 tiles in each row. Write the four related facts.

ANSWER _____

- 2** An array has 4 rows with 7 dots in each row. Write the four related facts.

ANSWER _____

- 3** There are 5 bags with 9 marbles in each bag. Write the four related facts.

ANSWER _____

- 4** An array has 9 rows with 4 squares in each row. Write the four related facts.

ANSWER _____

- 5** There are 7 boxes with 10 crayons in each box. Write the four related facts.

ANSWER _____

- 6** An array has 2 rows with 10 stars in each row. Write the four related facts.

ANSWER _____

APPLY IT Show your work

- 1** Maya puts 9 trading cards on each of 4 album pages. Write four related facts for the cards and pages.

WORK SPACE

ANSWER _____

- 2** A club has 6 packs of temporary tattoos. Each pack has 7 tattoos. Write four related facts for the packs and tattoos.

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

A display has 54 keychains in equal rows. One related fact is $6 \times \underline{\quad} = 54$. Fill in the blank, then write all four related facts.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	An array has 2 rows with 6 tiles in each row. Write the four related facts.	$2 \times 6 = 12$; $6 \times 2 = 12$; $12 \div 2 = 6$; $12 \div 6 = 2$
2	An array has 4 rows with 7 dots in each row. Write the four related facts.	$4 \times 7 = 28$; $7 \times 4 = 28$; $28 \div 4 = 7$; $28 \div 7 = 4$
3	There are 5 bags with 9 marbles in each bag. Write the four related facts.	$5 \times 9 = 45$; $9 \times 5 = 45$; $45 \div 5 = 9$; $45 \div 9 = 5$
4	An array has 9 rows with 4 squares in each row. Write the four related facts.	$9 \times 4 = 36$; $4 \times 9 = 36$; $36 \div 9 = 4$; $36 \div 4 = 9$
5	There are 7 boxes with 10 crayons in each box. Write the four related facts.	$7 \times 10 = 70$; $10 \times 7 = 70$; $70 \div 7 = 10$; $70 \div 10 = 7$
6	An array has 2 rows with 10 stars in each row. Write the four related facts.	$2 \times 10 = 20$; $10 \times 2 = 20$; $20 \div 2 = 10$; $20 \div 10 = 2$

PART 2 • APPLY IT

- $4 \times 9 = 36$; $9 \times 4 = 36$; $36 \div 4 = 9$; $36 \div 9 = 4$ Multiply 4 pages by 9 cards to find 36 cards. Use 4, 9, and 36 to write the related multiplication and division facts.
- $6 \times 7 = 42$; $7 \times 6 = 42$; $42 \div 6 = 7$; $42 \div 7 = 6$ Multiply 6 packs by 7 tattoos to find 42 tattoos. Use 6, 7, and 42 to write the related facts.

CHALLENGE

The blank is 9. $6 \times 9 = 54$; $9 \times 6 = 54$; $54 \div 6 = 9$; $54 \div 9 = 6$

Accept the four related equations in any order. Accept a correct missing factor and all four facts for the challenge.