

Relating Multiplication and Division



Quick Review

There are 42 students who want to play hockey.
There are 6 players on a team.
How many teams can there be?

To find out, divide: $42 \div 6$
Here are two ways to find $42 \div 6$:

- Make an array of 42 counters with 6 counters in each row.

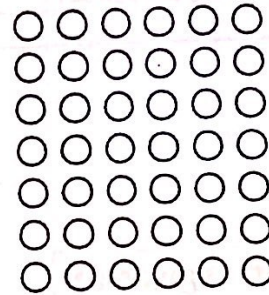
There are 7 rows.

So: $42 \div 6 = 7$

There can be 7 teams.

- You can think about multiplication to divide.

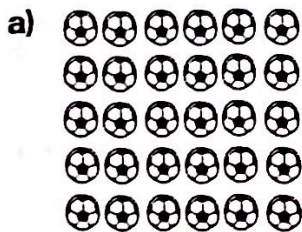
Every division fact has a related multiplication fact.



6 times which number is 42?
You know $6 \times 7 = 42$.
So, $42 \div 6 = 7$

Try These

1. Write a multiplication fact and a division fact for each array.



2. Use a related multiplication fact to help you divide. Write the related fact.

a) $20 \div 4 =$ _____

b) $30 \div 5 =$ _____

c) $14 \div 7 =$ _____

Practice

1. Divide. Draw a picture to show your work.

$24 \div 3 = \underline{\quad}$	$30 \div 5 = \underline{\quad}$
$18 \div 2 = \underline{\quad}$	$5 \div 5 = \underline{\quad}$

2. Use a related multiplication fact to divide.

- a) $18 \div 6 = \underline{\quad}$ b) $45 \div 5 = \underline{\quad}$ c) $56 \div 7 = \underline{\quad}$ d) $35 \div 5 = \underline{\quad}$
- e) $24 \div 4 = \underline{\quad}$ f) $27 \div 3 = \underline{\quad}$ g) $12 \div 2 = \underline{\quad}$ h) $9 \div 1 = \underline{\quad}$

3. Write a division fact to solve each question.

- a) 24 children
6 children on a team
How many teams?

- b) 18 cookies
9 cookies on a plate
How many plates?

- c) 42 cans
7 cans in each row
How many rows?

Stretch Your Thinking

Find all the ways of dividing 36 students into equal teams.
Write a division fact to show each way.

Dividing by Numbers from 1 to 9



Quick Review

Here's how to divide by 8 and 9.

$$48 \div 8$$

$$8 \times \square = 48$$

$$8 \times 6 = 48$$

So, $48 \div 8 = 6$

Also, $48 \div 6 = 8$

Think
multiplication.

Related Facts

$$48 \div 8 = 6$$

$$48 \div 6 = 8$$

$$6 \times 8 = 48$$

$$8 \times 6 = 48$$

$$63 \div 9$$

$$9 \times \square = 63$$

$$9 \times 7 = 63$$

So, $63 \div 9 = 7$

Also, $63 \div 7 = 9$

Think
multiplication.

Related Facts

$$63 \div 9 = 7$$

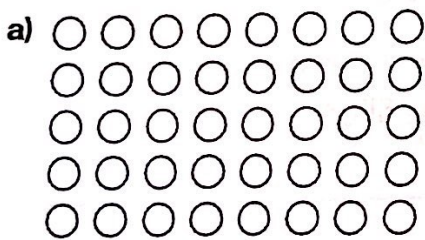
$$63 \div 7 = 9$$

$$7 \times 9 = 63$$

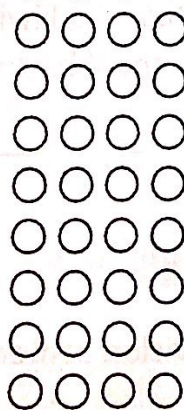
$$9 \times 7 = 63$$

Try These

1. Write two multiplication facts and two division facts for each array.



b)



2. Divide.

a) $27 \div 9 =$ _____ b) $16 \div 8 =$ _____

c) $45 \div 9 =$ _____ d) $64 \div 8 =$ _____

e) $36 \div 9 =$ _____ f) $32 \div 8 =$ _____

Practice

1. Find the product. Then write a related multiplication fact and two related division facts.

a) $3 \times 9 =$ _____ b) $8 \times 5 =$ _____ c) $9 \times 7 =$ _____

2. Divide.

a) $49 \div 7 =$ _____ b) $81 \div 9 =$ _____ c) $45 \div 5 =$ _____

d) $27 \div 3 =$ _____ e) $56 \div 8 =$ _____ f) $36 \div 6 =$ _____

3. Write a division sentence to show each answer.

- a) There are 28 days in February. How many weeks is that?

- b) There are 3 tennis balls in a carton.

How many cartons are needed for 27 balls?

- c) There are 54 students in the band. They march in 6 equal rows.
How many students are in each row?

- d) There are 9 kiwi fruit in a small basket.

A box contains 72 kiwi fruit in a single layer.

How many small baskets of kiwi fruit can be filled?

Stretch Your Thinking

Complete this division sentence in as many ways as you can. $\square \div \square = 8$
