



Stuck? Scan
for the anchor
chart

WHAT DIVISION MEANS • GRADE 3

Division Is a Question

$12 \div 3$ is not just a problem to solve.
It is a question you can ask **five different ways**.

1

Equal groups

If 12 cookies go on 3 plates, how many on each plate?



2

Rows and columns

If 12 chairs make 3 rows, how many chairs in each row?



3

Times as much

If 12 is 3 times as big as my number, what is my number?



4

Fair rates

If 3 pencils cost 12 dollars, how much is one pencil?



5

Combinations

If 3 shirts make 12 outfits, how many pairs of pants do I have?



One more secret: every division fact is a multiplication fact turned around. $3 \times 4 = 12$, so $12 \div 3 = 4$.

Roots of Reason

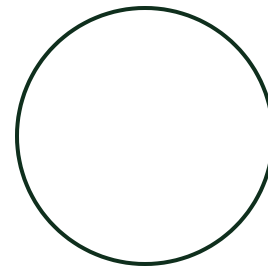
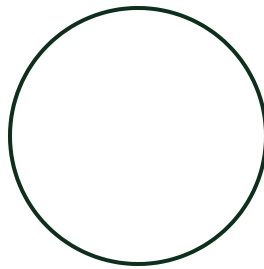
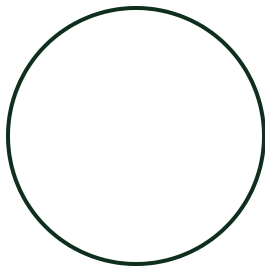
What Division Means · 1 of 5

Name _____ Date _____

Equal Groups: Sharing

$12 \div 3$ can ask: **"12 cookies, 3 plates. How many cookies on each plate?"**

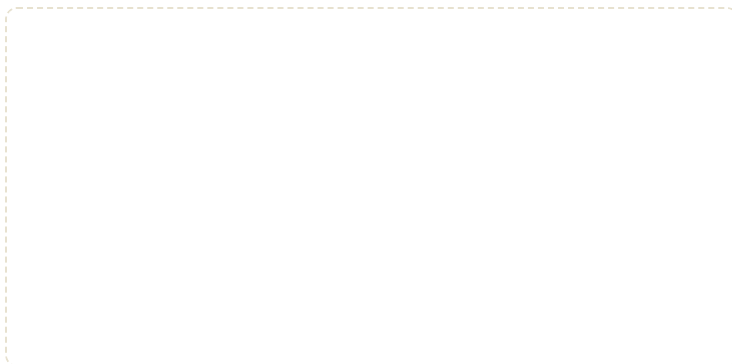
1. Here are 12 cookies and 3 plates. Draw a line from each cookie to a plate. Deal them out like cards: one for you, one for you, one for you. Every plate must get the same.



Each plate gets

cookies. So $12 \div 3 =$

2. Your turn to be the picture-maker. Draw **10 strawberries shared by 2 friends**. Then finish the sentence.

 $10 \div 2 =$



Real-life photo: something shared
equally

Sharing happens at every dinner table.

Roots of Reason

What Division Means · 1 of 5, part two

Name _____ Date _____

Equal Groups: Making Bags

The SAME problem, $12 \div 3$, can also ask:**"12 apples, 3 in each bag. How many bags can I fill?"**

1. Here are 12 apples. Draw a loop around every **group of 3**. Each loop is one full bag. Then count your loops.

I can fill bags. So $12 \div 3 =$ again!

2. **Think about it.** On the last page, $12 \div 3 = 4$ meant 4 cookies on each plate. On this page, $12 \div 3 = 4$ means 4 bags. Same answer, different question. Circle the one where you **already know** how many groups:

cookies on 3 plates

apples, 3 to a bag

Roots of Reason

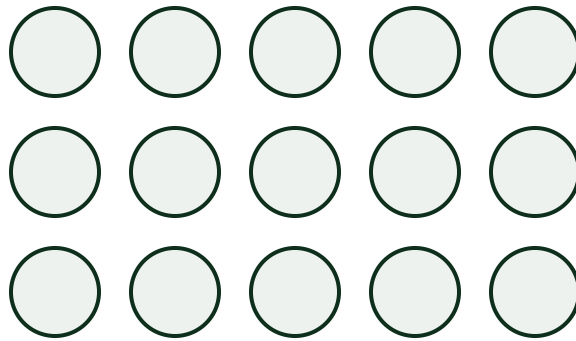
What Division Means · 2 of 5

Name _____ Date _____

Rows and Columns

$15 \div 3$ can ask: **"15 chairs in 3 equal rows. How many chairs in each row?"**

1. The chairs are set up. Count how many are in one row, then check: does every row match?



Each row has

chairs. $15 \div 3 =$

2. Now build your own. Draw **8 dots in 2 equal rows** in the space below. Big dots! Use the whole box.

$8 \div 2 =$

The magic of an array: turn it sideways and it still works. 3 rows of 5 or 5 rows of 3, the chairs never change.

Roots of Reason

What Division Means · 3 of 5

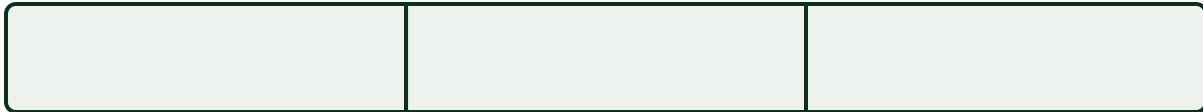
Name _____ Date _____

Times as Much

12 ÷ 3 can ask: **"Mia has 12 marbles. That is 3 times as many as Leo. How many does Leo have?"**

1. Mia's bar shows 12. It is cut into 3 equal pieces because she has 3 times Leo's amount. **One piece** is exactly Leo's share. Write the number that goes in each piece, then fill in Leo's bar.

Mia · 12 marbles



Leo · ? marbles



Leo has

marbles. 12 ÷ 3 =

2. Draw your own bars: Dad is **2 times as old** as Jo, and Dad is 16. Draw Dad's bar cut into 2 pieces, then Jo's bar under it.

Jo is

years old.

Roots of Reason

What Division Means · 4 of 5

Name _____ Date _____

Fair Rates: How Much for One?

 $12 \div 3$ can ask: "3 pencils cost 12 dollars. How much for ONE pencil?"

1. Here are 12 dollar coins. Share them fairly under the 3 pencils: draw each coin's path, or just draw the coins under each pencil.



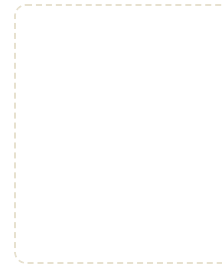
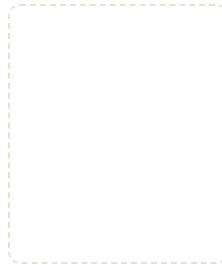
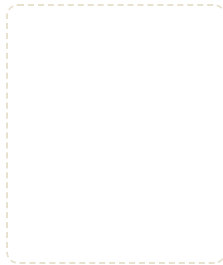
pencil 1



pencil 2



pencil 3

One pencil costs dollars. $12 \div 3 =$

2. A snail crawls **8 feet in 2 hours**, moving steadily the whole time. How far in ONE hour?

 $8 \div 2 =$ feet each hour

Real-life photo: a price tag or speed sign

"How much for one?" is division at the store.

Roots of Reason

What Division Means · 5 of 5

Name _____ Date _____

Combinations: Outfits

$6 \div 3$ can ask: **"I can make 6 outfits with 3 shirts. How many pairs of pants do I own?"**

1. Every box in this chart is one outfit: a shirt matched with pants. Fill in the missing pants labels, then count.

	pants _____	pants _____
red shirt	outfit 1	outfit 2
blue shirt	outfit 3	outfit 4
green shirt	outfit 5	outfit 6

6 outfits $\div$ 3 shirts = pairs of pants

2. Ice cream shop: 2 cones and some flavors make **8 different treats**. Draw a chart like the one above (cones down the side, flavors across the top).

$8 \div 2 =$ flavors



WHAT DIVISION MEANS · GRADE 3

Answer Key and Teacher Notes

Sharing (page 2)

1. Each plate gets 4; $12 \div 3 = 4$ 2. $10 \div 2 = 5$

Making bags (page 3)

1. 4 bags 2. Circle *cookies on 3 plates* (the number of groups is known; the bag problem knows the group SIZE instead)

Rows and columns (page 4)

1. 5 chairs per row 2. $8 \div 2 = 4$ (2 rows of 4)

Times as much (page 5)

1. Each piece is 4; Leo has 4 2. Jo is 8 ($16 \div 2$)

Fair rates (page 6)

1. 4 dollars each 2. 4 feet each hour

Combinations (page 7)

1. 2 pairs of pants 2. 4 flavors ($2 \text{ cones} \times 4 \text{ flavors} = 8 \text{ treats}$)

The set works as five mini anchor charts. The pair to slow down on is pages 2 and 3: sharing (how many in each group) versus measuring out (how many groups). A student who can say which question a word problem is asking, before computing anything, has the concept. The drawing boxes are the assessment; the number boxes are just the receipt.