Ark Curriculum+

Year 5 Unit 6: Fractions and decimals

Week 3: Working with fractions and decimals

Mathematics
Mastery

Year 5 Unit 6: Fractions and decimals

Mathematics Mastery

This Week

Lesson 11: Ordering decimals

- To order and compare decimals with up to three decimal places

Lesson 12: Rounding decimals

- To round decimal numbers

Lesson 13: Fractions and division

- To solve problems involving fractions and division

Lesson 14 and 15: Consolidation and review

- See unit narrative (no slides provided)

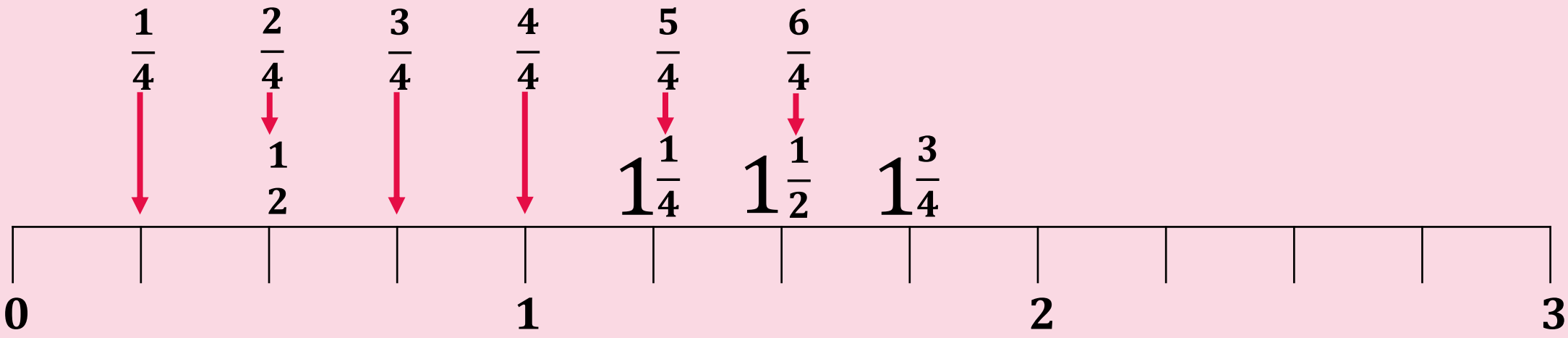
Ark Curriculum+

Year 5 Unit 6: Fractions and decimals

Lesson 11: Ordering decimals

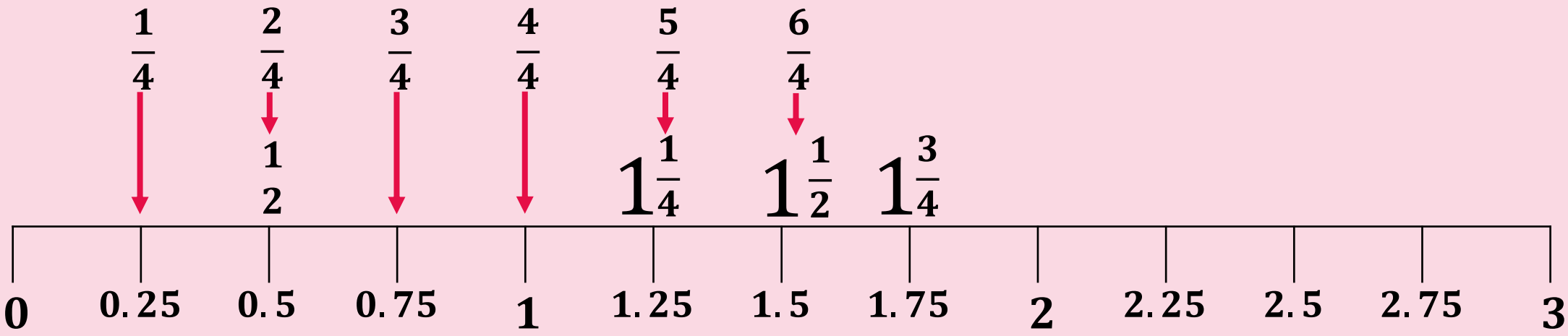
Mathematics
Mastery

Skip-counting



Do Now

Skip-counting



Do Now

Key learning: To order and compare decimals with up to three decimal places

Star Words

whole number

decimal point

place value

tens

ones

tenths

hundredths

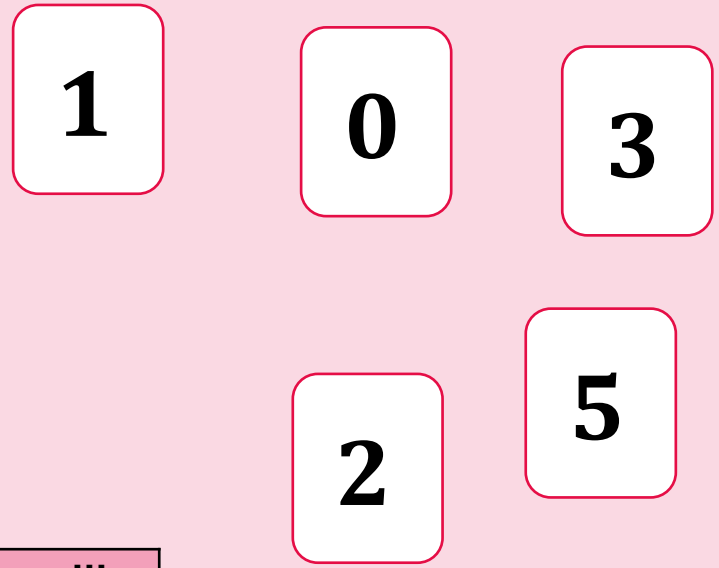
greater than

less than

equal to

Generating, comparing and ordering decimal numbers

- How many numbers with up to three decimal place can be made with these digits?
- How does the value of the digit change when it is in a different place?



Tens	Ones	Tenths	Hundredths	Thousandths

New Learning

Generating, comparing and ordering decimal numbers

- Which number has greater value? How do you know?
- How can you explain why a number is greater than or less than another number?

Tens	Ones	Tenths	Hundredths	Thousandths
1	5	0	2	3
10	1 1 1 1 1			
1	5	2	3	
10	1 1 1 1 1			

New Learning

Place-value battle

Talk Task

Tens	Ones	Tenths	Hundredths	Thousandths

Target: Number closest to five

Target: Smallest number

We have the digit 4. We are trying to make the number closest to 5. We could place it in the ones place and hope for a 9 for the tenths place.

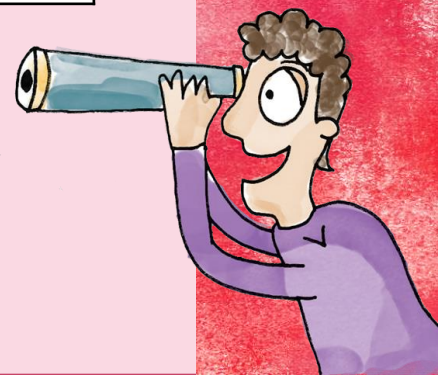
We have a 9. We already have the digit 5 in the ones place. We should make it have the least value because we need to stay close to 5. Let's put it in the thousandths place.

Reviewing the battle

- Which was the winning number?
- What could the winning number have been?

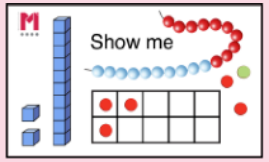
Target: Largest number

Tens	Ones	•	Tenths	Hundredths	Thousandths
7	8	•	0	6	1
8	1	•	4	7	3



Develop Learning

Key learning: To order and compare decimals with up to three decimal places



Comparing and ordering decimal numbers

Independent Task

Tens	Ones	Tenths	Hundredths	Thousandths

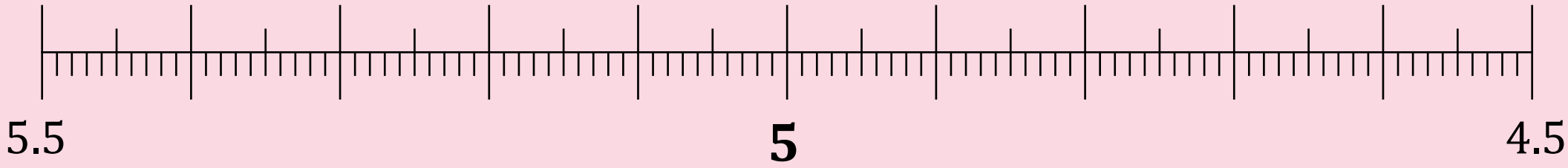
Largest number: 96.532

I should have made the digit 3 ten times greater by placing it in the hundredths column instead of the thousandths.

Smallest number: 23.569

The digit 2 has a greater value of 20 instead of 0.02.

Target number



Plenary

Ark Curriculum+

Year 5 Unit 6: Fractions and decimals

Lesson 12: Rounding decimals

Mathematics
Mastery

True or false?

Find the errors. Explain why they are incorrect and how to correct them.

$4{,}320$ rounded to the nearest thousand is $4{,}300$.

325 rounded to the nearest ten is 320.

$4{,}764$ rounded to the nearest hundred is $4{,}700$.

Do Now

Key learning: To round decimal numbers

Star Words

round

whole number

decimal point

place value

tens

ones

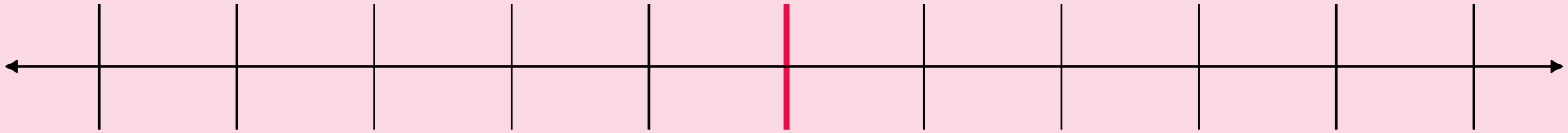
tenths

hundredths

multiple

Rounding decimals to the nearest whole number

- What whole number is the closest to 3.4?
- What whole number is the closest to 7.6?
- What whole number is the closest to 1.5?



New Learning

Rounding decimals to the nearest whole number

What whole number is the closest to 3.4?

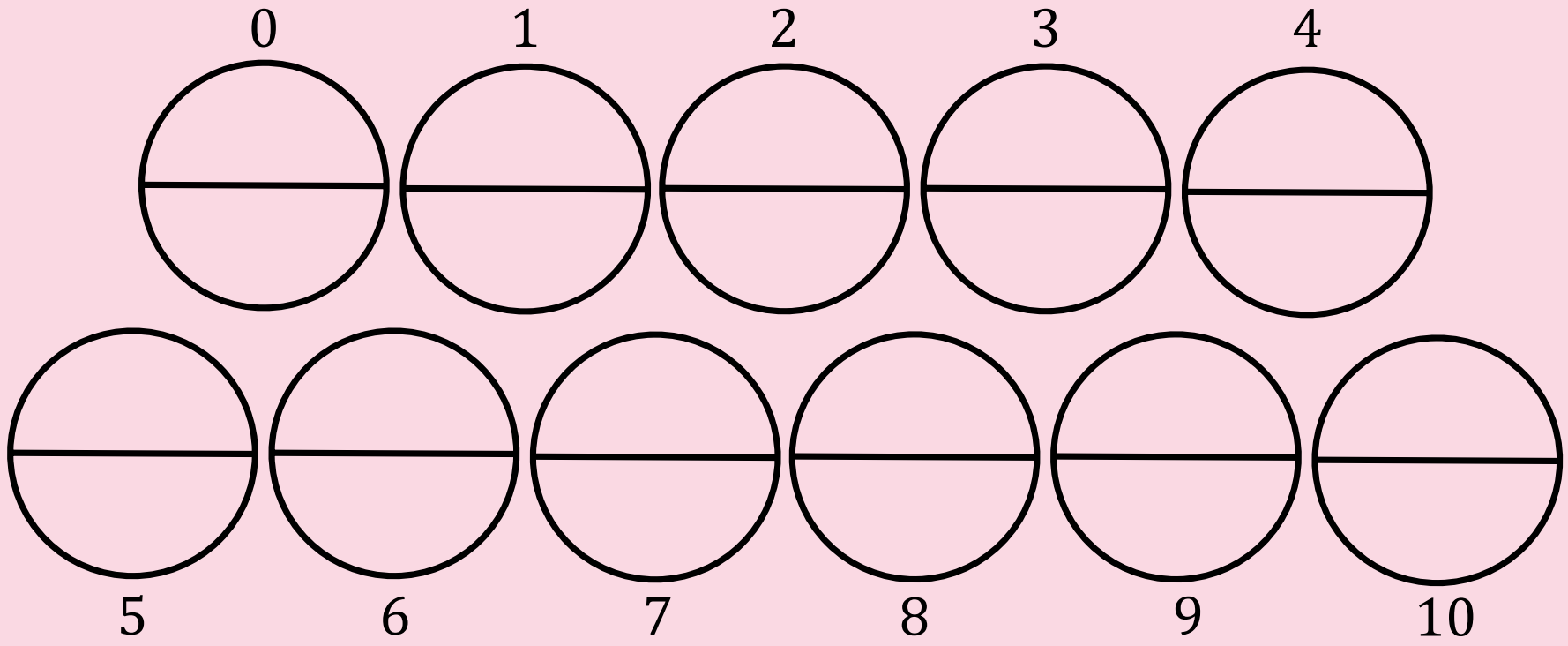
New Learning

Rounding decimals to the nearest whole number

Talk Task

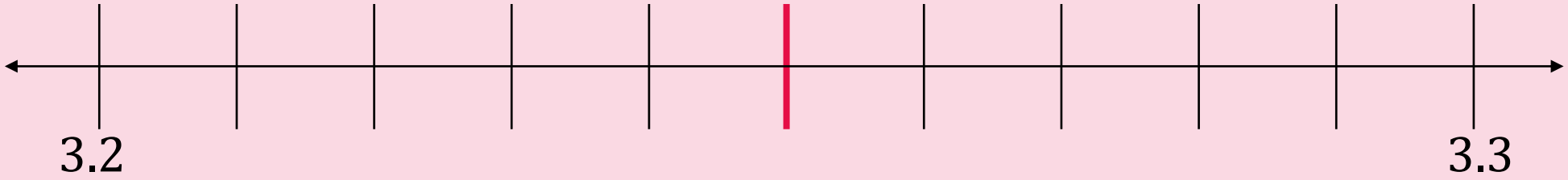
Generate decimal numbers. Round them to the nearest whole number and record the rounded value in the circle labelled.

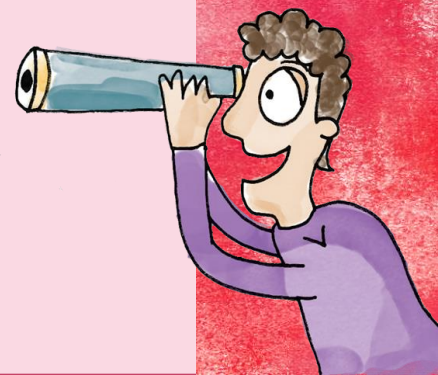
You get a point if you are able to complete a circle.



Rounding decimals to one decimal place

What decimal number can be placed on this number line?

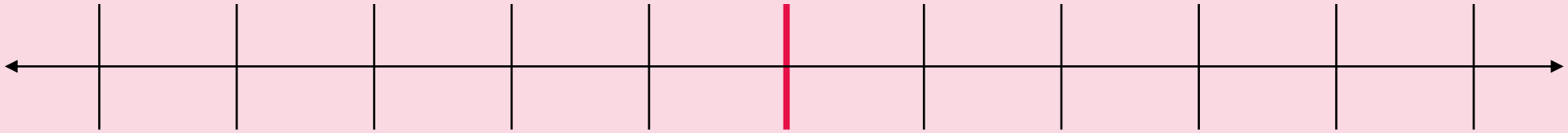




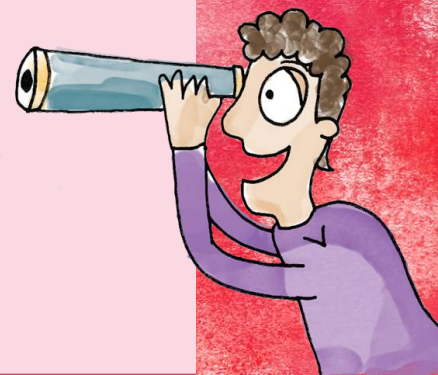
Develop Learning

Rounding decimals to one decimal place

- What is 4.56 rounded to one decimal place?
- What is 6.97 rounded to one decimal place?



Develop Learning

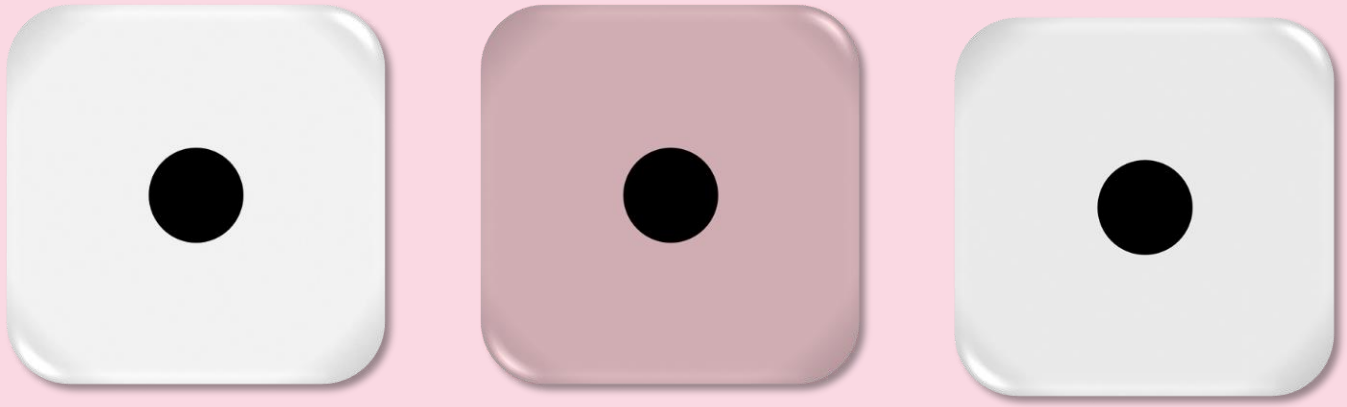


Key learning: To round decimal numbers

Rounding dice 2

- Generate three digits and make six different decimal numbers, each with two decimal places.
- Round each number to one decimal place.
- How many different numbers do they round to?
- Will they always round to different numbers?

2.34	2.43
3.24	3.42
4.23	4.32



Independent Task

Celebrating success and addressing misconceptions

What did you find out?

Plenary

Ark Curriculum+

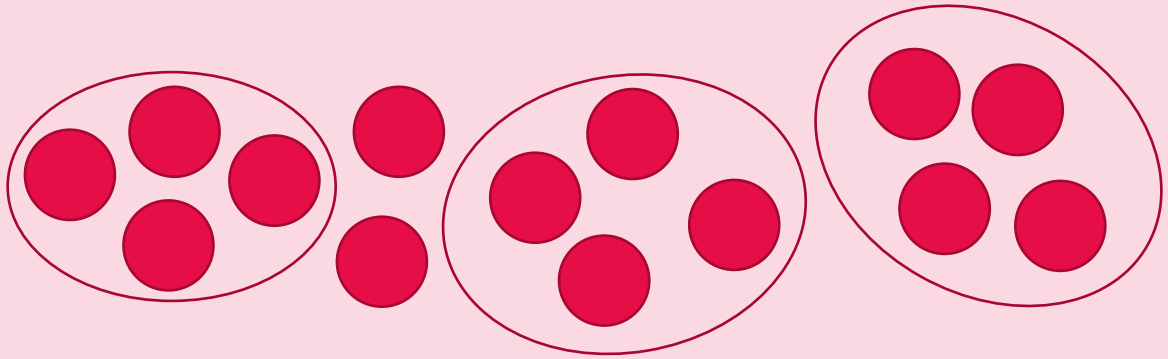
Year 5 Unit 6: Fractions and decimals

Lesson 13: Fractions and division

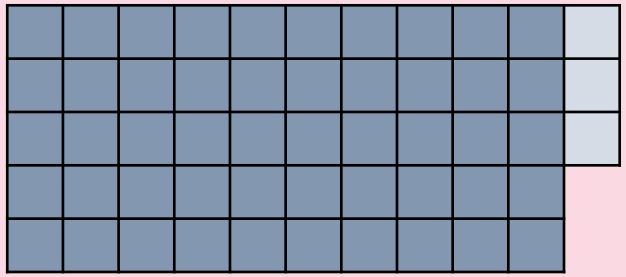
Mathematics
Mastery

Division with remainders

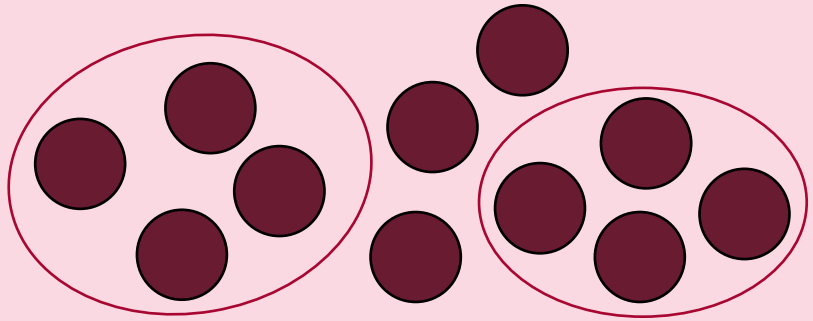
$14 \div \square = 4\ r\ 2$



$\square \div 5 = 10\ r\ 3$



$11 \div 4 = \square\ r \square$



Do Now

Key learning: To solve problems involving fractions and division

Star Words

divide

share

group

regroup

fraction

decimal point

tenths

hundredths

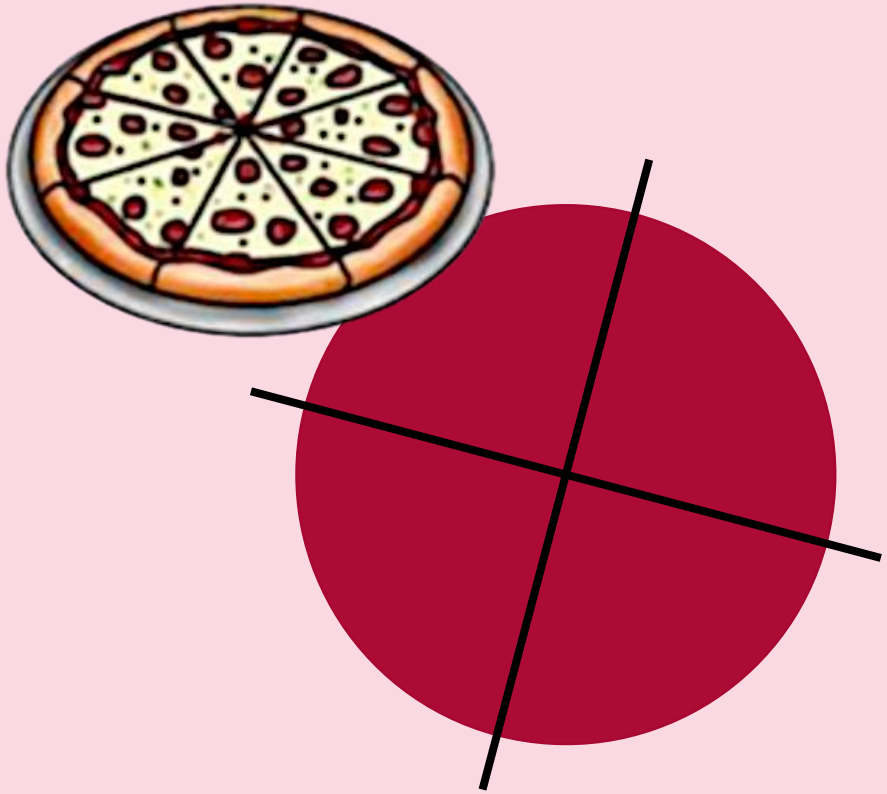
multiple

Fractions and division

New Learning

If three pizzas are shared equally between four people, how much does each person get?

If it was one pizza, how much would each person get?

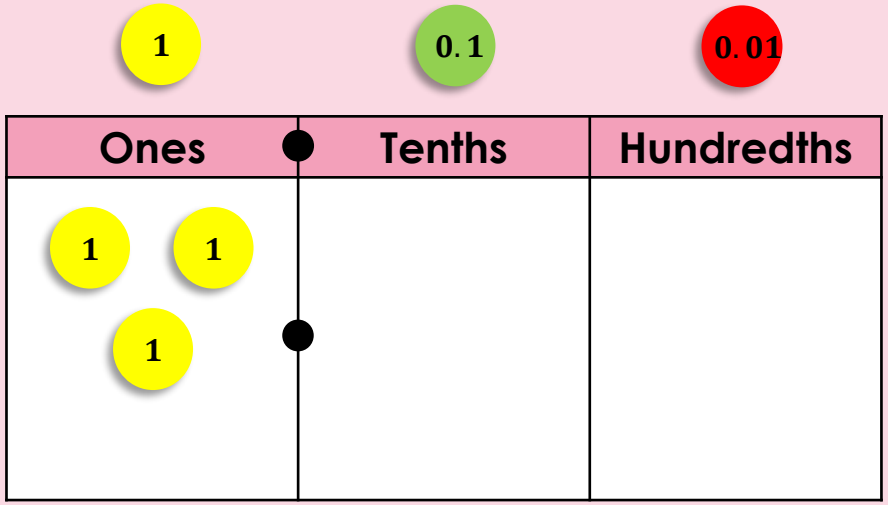


Fractions and division

A fraction can be the result of a division.

$$3 \div 4 = \frac{3}{4}$$

	4	3			



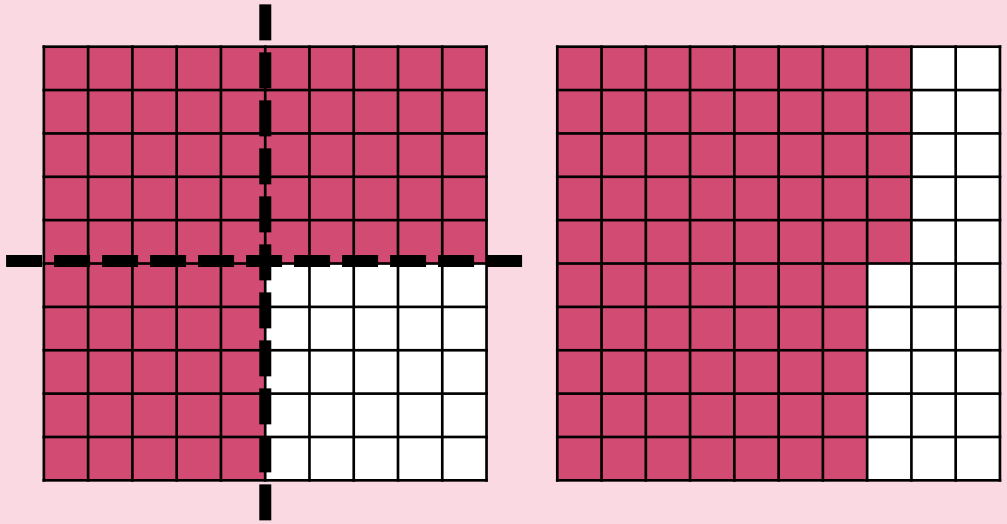
New Learning

Fractions and division

A fraction can be the result of a division.

$$3 \div 4 = \frac{3}{4} = \frac{75}{100}$$

		0 •	7	5	
	4	3 •	$^{3}0$	$^{2}0$	

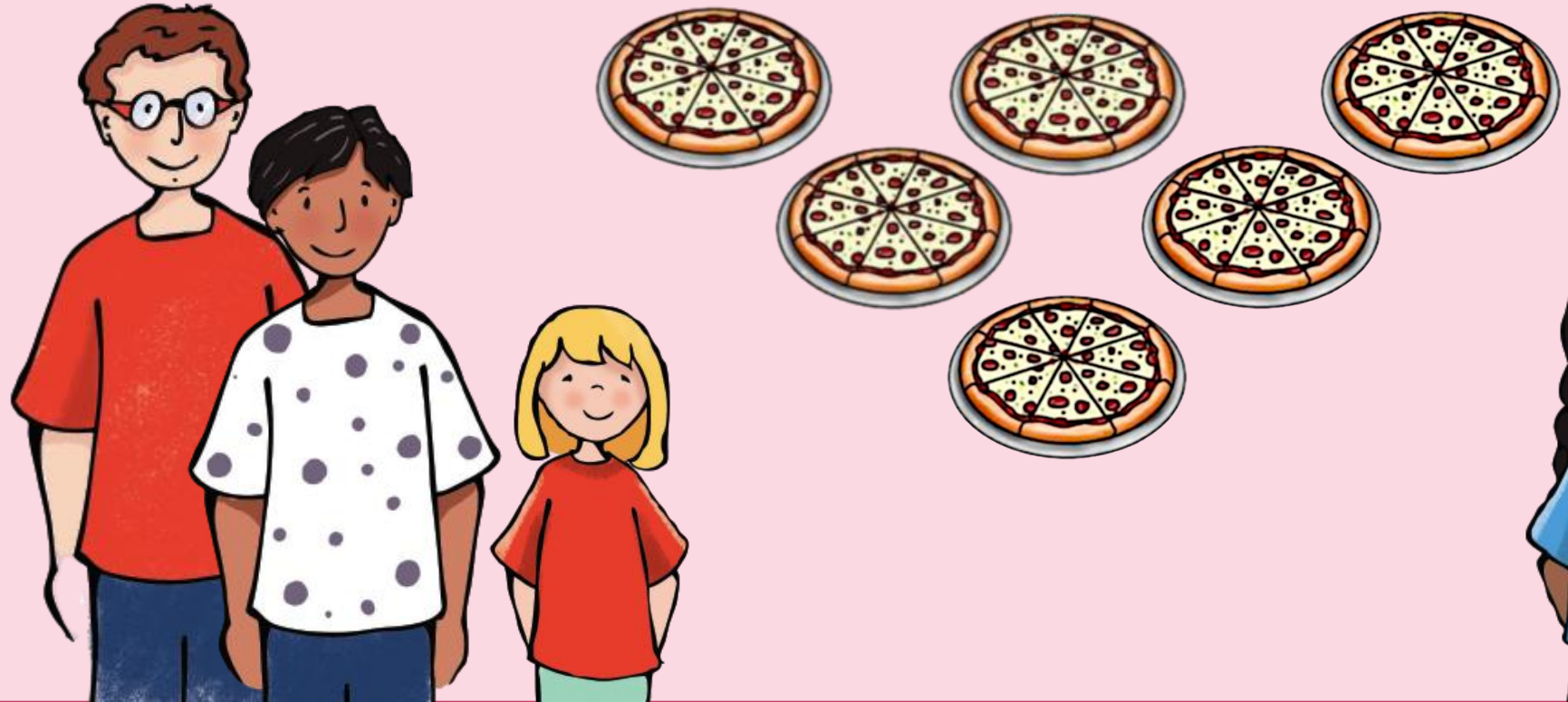


New Learning

Fractions and division

If six pizzas are shared equally between five people, what fraction does each person get?

What should you do with the remaining pizza?



New Learning

Fractions as division

Talk Task

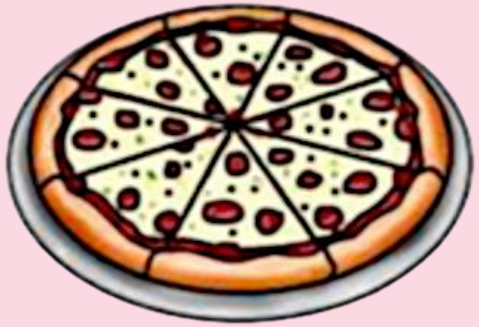
Solve each problem using division, showing and explaining each step of the method. Record the result in as many different ways as you can.

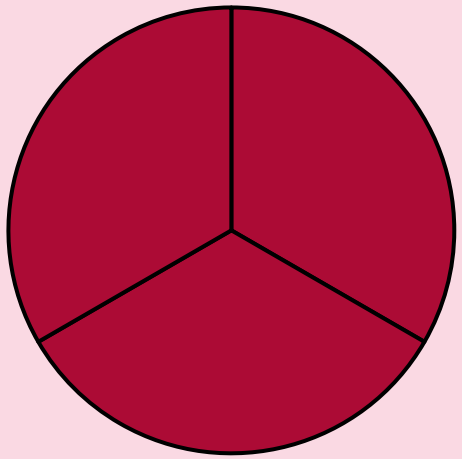
1) Four pizzas are shared between five people. How much pizza does each person get?

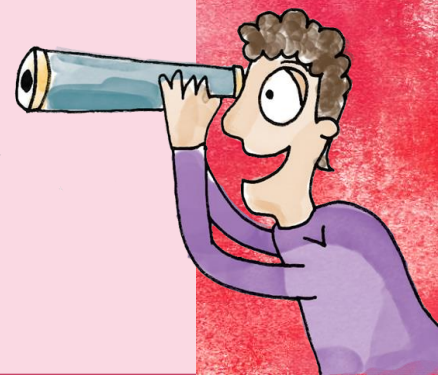
2) Four hungry people share six pizzas equally. How much pizza does each person get?

Recurring decimals

If one pizza is divided equally between three people, how much does each person get?







Develop Learning

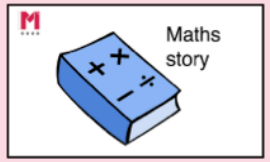
Key learning: To solve problems involving fractions and division

Problems involving fractions and division

$7 \div 3$

$11 \div 5$

Independent Task



Celebrating success and addressing misconceptions

Share different stories and decide if the concluding statement is clear.

Discuss other ways to conclude each story.

Plenary