



# Maths

## Number and Place Value

# Number and Place Value Starter Ideas



# Contents

Number Cards

Naming Number Dominoes

Beat the Teacher 1

Spotting Mistakes

Beat the Teacher 2

Number Rules

Find Your Partner

Get in Line

Dice Dilemma

Fraction Action

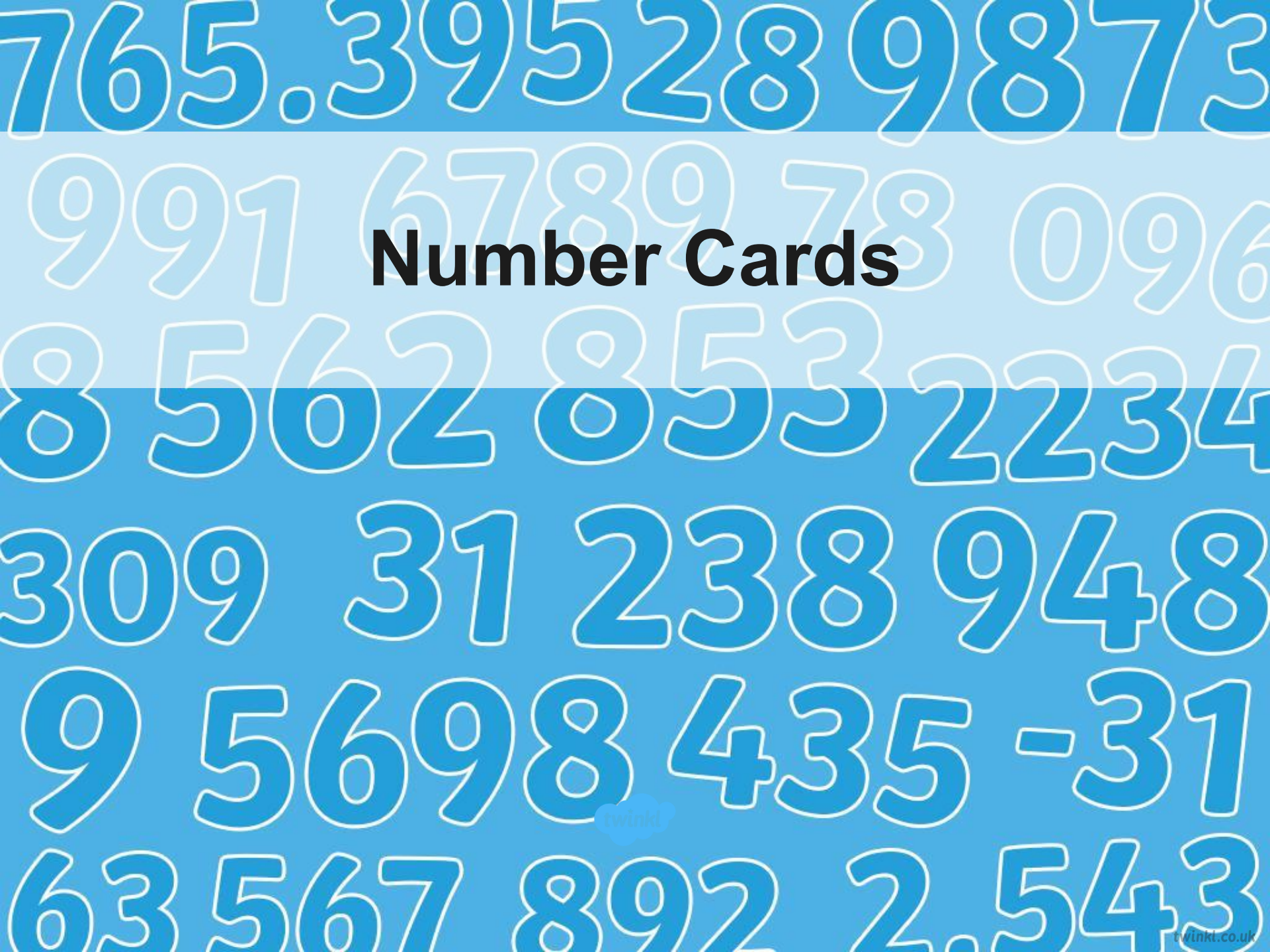
Number in Words

Magic Negatives

Negative Number Line Loop Cards



# Number Cards



# Number Cards



Here are six number cards:

5

2

7

8

1

3

Can you use them to make a number that has a five in the thousands place?



# Number Cards



Here are six number cards:

5

2

7

8

1

3

Can you use four of the cards to make a four-digit number that has a three in the hundreds place and has a digit total of 17?

# Number Cards



Here are six number cards:

5

2

7

8

1

3

What is the lowest five-digit number you can make that has an eight in the tens place?



# Number Cards



Here are six number cards:

5

2

7

8

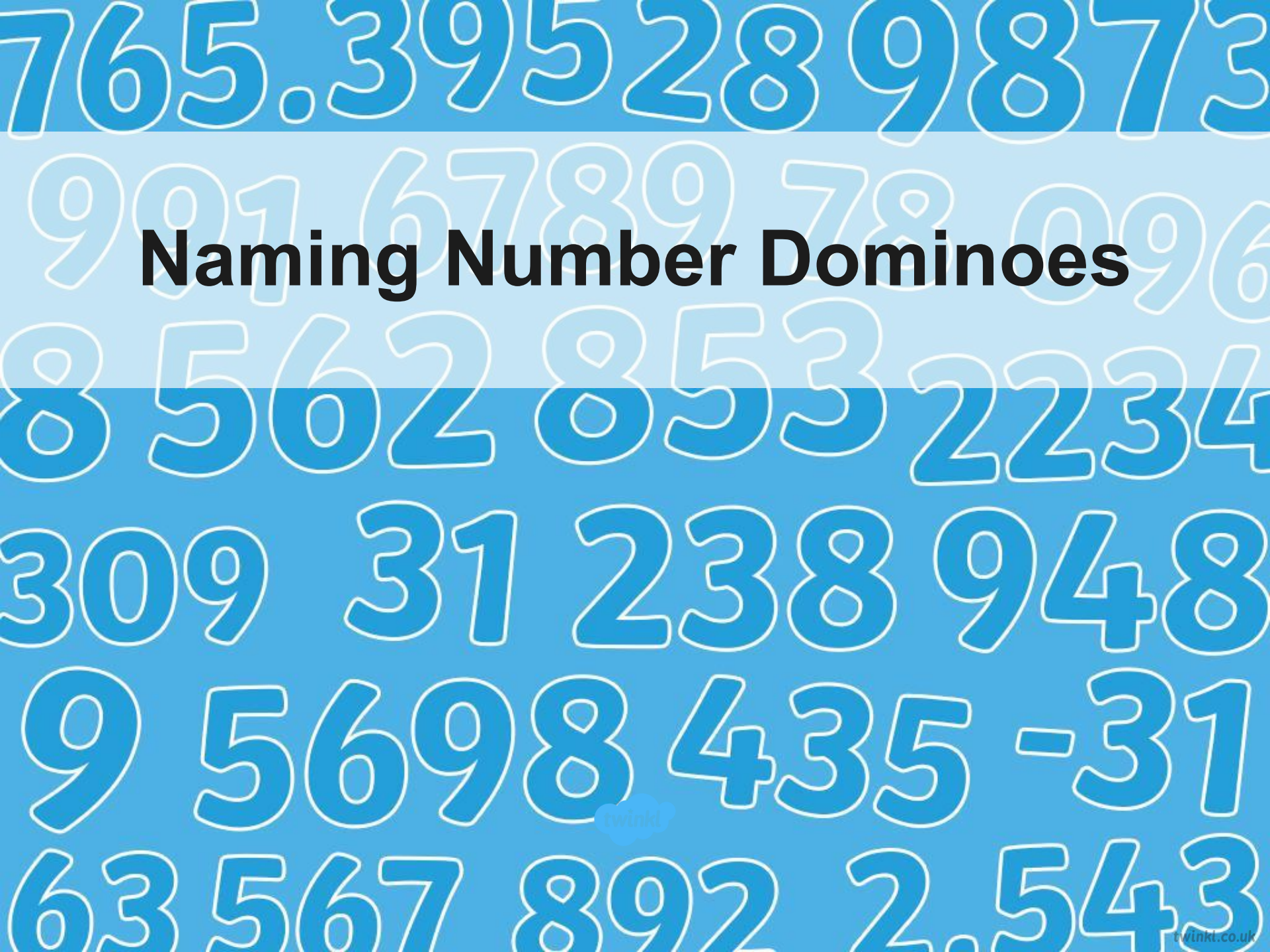
1

3

What is the difference between the largest number and the smallest number that can be made using all six cards?



# Naming Number Dominoes



# Naming Numbers Dominoes



Play dominoes with your partner or group by matching the numbers with the words.

Who will be first to use all their dominoes?

Eight thousand, three hundred and thirty-two	twinkl.co.uk
489.5	

54 729	★★	Four hundred and eighty-nine point five	twinkl.co.uk
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5847	★★	Thirty nine thousand, four hundred and thirty-four	twinkl.co.uk
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892 $\frac{1}{4}$	★★	Fifty-four thousand, seven hundred and twenty-nine	twinkl.co.uk
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39 434		Eight hundred and ninety-two and a quarter	twinkl.co.uk
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305 $\frac{1}{5}$	★★	Five thousand, eight hundred and forty-seven	twinkl.co.uk
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# Beat the Teacher 1

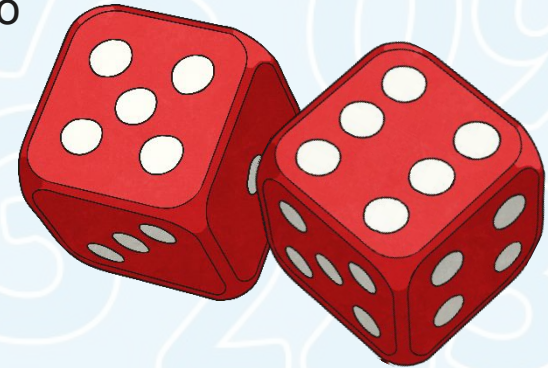
# Beat the Teacher



The aim of this game is to create the smallest number. We will take turns to roll the dice, and decide where to place the digits shown on the dice in the grid below.

I will go first, then I will choose someone from our class to have a turn.

Think carefully about where to place the digits to create the smallest number.



Hundreds	Tens	Ones	Tenths	Hundredths	Thousandths



# Beat the Teacher



Now we will play again, but this time we will have a different aim!

Hundreds	Tens	Ones	Tenths	Hundredths	Thousandths

# Spotting Mistakes



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# Spotting Mistakes



The year 6 class at Anywhere School have been learning about number and place value. They have answered some questions, but their teacher is confused by their answers.

Can you spot their mistakes? Explain what each person did wrong and how they could correct their answers.



Five hundred and fifty thousand, six hundred and three is written 5563 in digits.

Sam has forgotten to put a zero in the thousands place and in the tens place  
The number should be **Reveal mistake**

# Spotting Mistakes



Can you spot their mistakes? Explain what each person did wrong and how they could correct their answers.



The value of the tenths digit in 23.64 is higher than than the value of the tenths digit in 26.9.

Mischa has got mixed up when comparing the place value of the different digits in these decimal numbers. In 23.64, the tenths digit is 6. In 26.9, the tenths digit is 9.

**Reveal mistake**



# Spotting Mistakes



Can you spot their mistakes? Explain what each person did wrong and how they could correct their answers.



Tenths are bigger than hundredths, so 0.2 is smaller than 0.02.

Robert has forgotten that the value of the digits gets smaller the further to the right of the decimal point they are. He may also have got mixed up with tens and hundreds. Two tenths is bigger than

**Reveal mistake**

# Spotting Mistakes



Can you spot their mistakes? Explain what each person did wrong and how they could correct their answers.



In the number 2 220 002, the digit in the ten thousands place is zero.

Olivia has got mixed up with the place value of each digit in this number. The digit in the ten thousands place

**Reveal mistake**



# Spotting Mistakes



Can you spot their mistakes? Explain what each person did wrong and how they could correct their answers.



The value of the thousandths digit in 19.042 is lower than then the value of the thousandths digit in 3.991.

Sean has not compared the value of just the thousandths digit in each number. He has compared the overall value of the decimal fraction of each number. The thousandths digit in 19.042 is 2, while the thousandths digit in 3.991 is 1. As we know, 2 is actu

**Reveal mistake**



# Beat the Teacher 2



# Beat the Teacher



The aim of this game is to create the smallest number. We will take turns to roll the dice, and decide where to place the digits shown on the dice in the grid below.

I will go first, then I will choose someone from our class to have a turn.

Think carefully about where to place the digits to create the smallest number.



Hundreds	Tens	Ones	Tenths	Hundredths	Thousandths

# Beat the Teacher



Now we will play again, but this time we will have a different aim!

Hundreds	Tens	Ones	Tenths	Hundredths	Thousandths



# Number Rules



# Number

## Rules

I am thinking of a rule about numbers. It might be 'numbers with a 5 in the hundredths place' or 'numbers higher than 10 000'.



Can you work out the rule I am thinking of?

I will ask the people who have written a number that follows the rule to stand up, holding their boards so everyone else can see their numbers.

Look around at the numbers.

- Can you spot the rule?
- What do all the numbers have in common?

Try to write a number that you think fits the rule.

We will repeat this until everyone has a number that fits the rule!

Write a number on your whiteboard and hold it up.





# Find Your Partner

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# Find Your Partner



I am going to give each person a card. On your card you will have either three terms from a sequence, or a sequence with three missing terms. Your task is to find your partner to match the sequence with the correct terms.

Can you move around the classroom to find your partner?

6.7, \_\_, 7.1, 7.3, \_\_, \_\_

0.1, 0.2, \_\_, 0.4, \_\_, \_\_

\_\_, 20, \_\_, 21,  $21\frac{1}{2}$ , \_\_

7430, \_\_, 7330, \_\_,  
\_\_, 7180

85 500

84 000

85 200

2.1

2.15

2.05

6.9

7.5

7.7

$19\frac{1}{2}$

$20\frac{1}{2}$

22

Be careful!  
The terms on  
the  
cards might  
not  
be in order.



# Get in Line

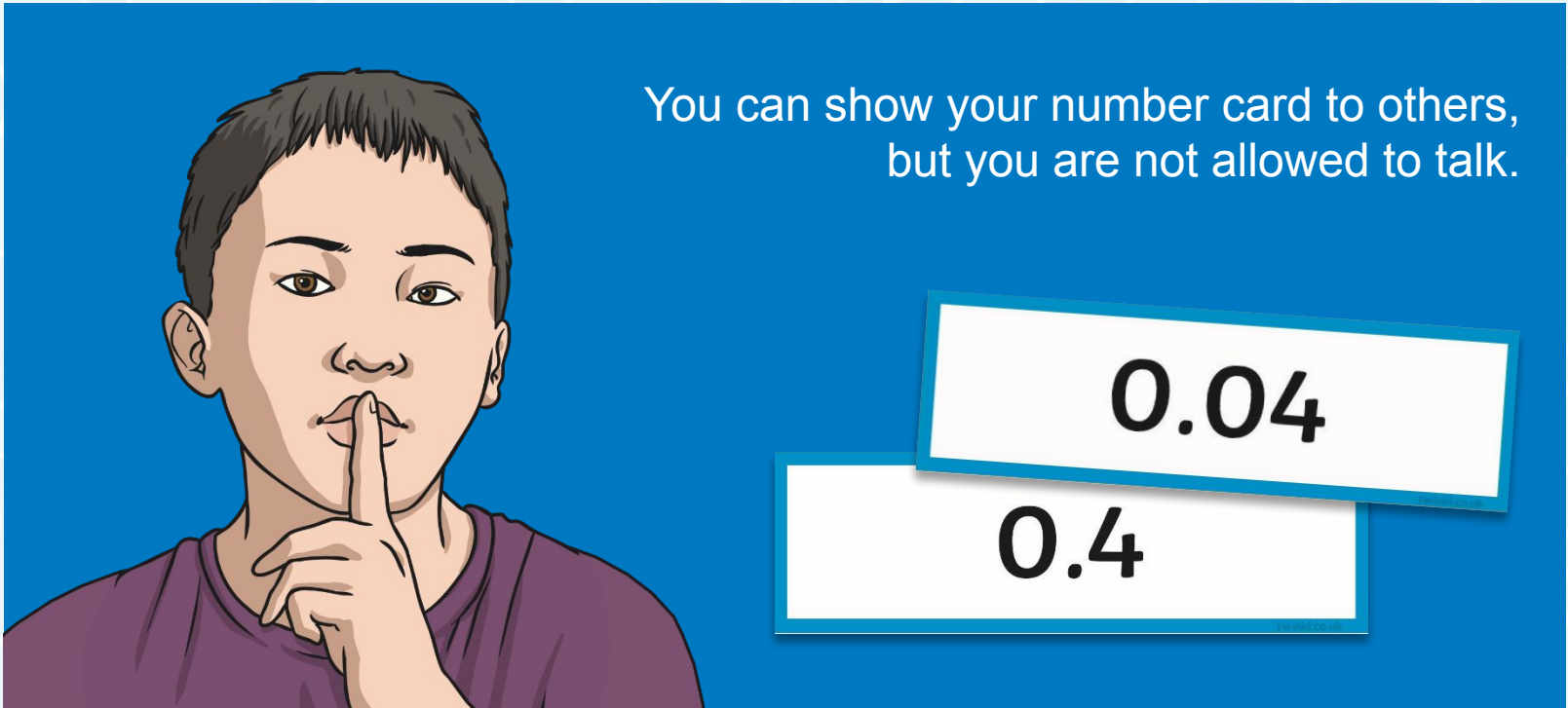
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# Get in Line



Each person has a number card.

Your whole class challenge is to stand in a line so that all your numbers are in order from smallest to biggest!



You can show your number card to others, but you are not allowed to talk.



# Dice Dilemma

# Dice Dilemma



On your Dice Dilemma Activity Sheet, you will see several blank number comparisons like this one:

	>	
--	---	--

You need to work with a partner to roll a dice to make each number comparison true.

Think carefully about where you place each digit as you roll the dice.





# Fraction Action

# Fraction Action



Each person in your group has a fraction card.

Unfortunately the fractions are mixed up!

You need to rearrange your group so that the fractions are in order.

Take care: some of the fractions have different denominators. You will need to convert them to equivalent fractions so that they all have the same denominator.

$$\frac{3}{8}$$

$$\frac{5}{8}$$

$$\frac{6}{8}$$

$$\frac{3}{7}$$

$$\frac{4}{7}$$

$$\frac{2}{8}$$



# Numbers in Words

# Numbers in Words



Can you solve these calculations using words?

What is six thousand less than one million?

Nine hundred and ninety-four thousand.

What is fifteen less than ten million?

Nine million, nine hundred and ninety-nine thousand, nine hundred and eighty-five.

What is five hundred less than five hundred thousand?

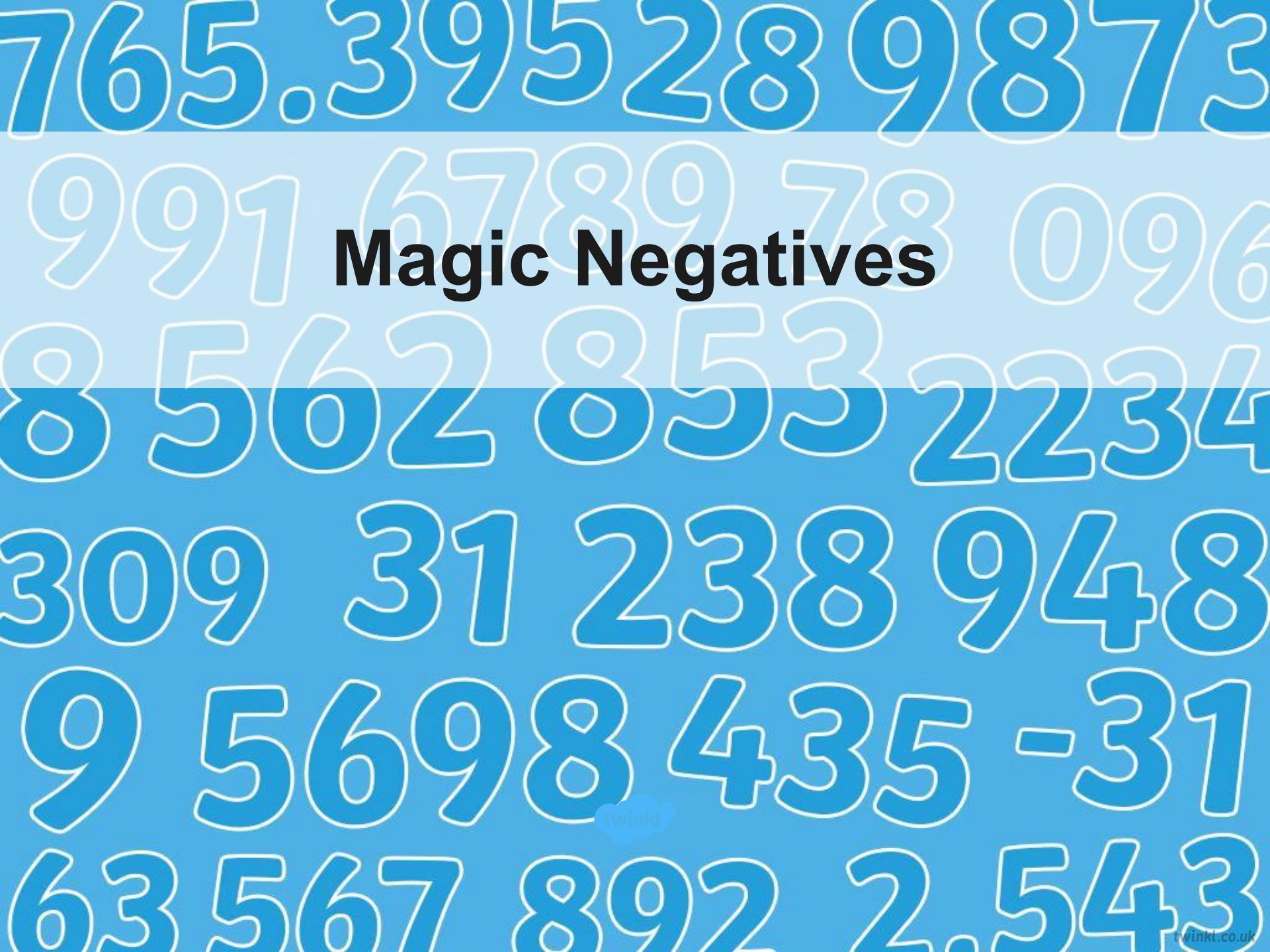
Four hundred and ninety-nine thousand, five hundred.

What is thirty thousand less than three million?

Two million, nine hundred and seventy thousand.



# Magic Negatives



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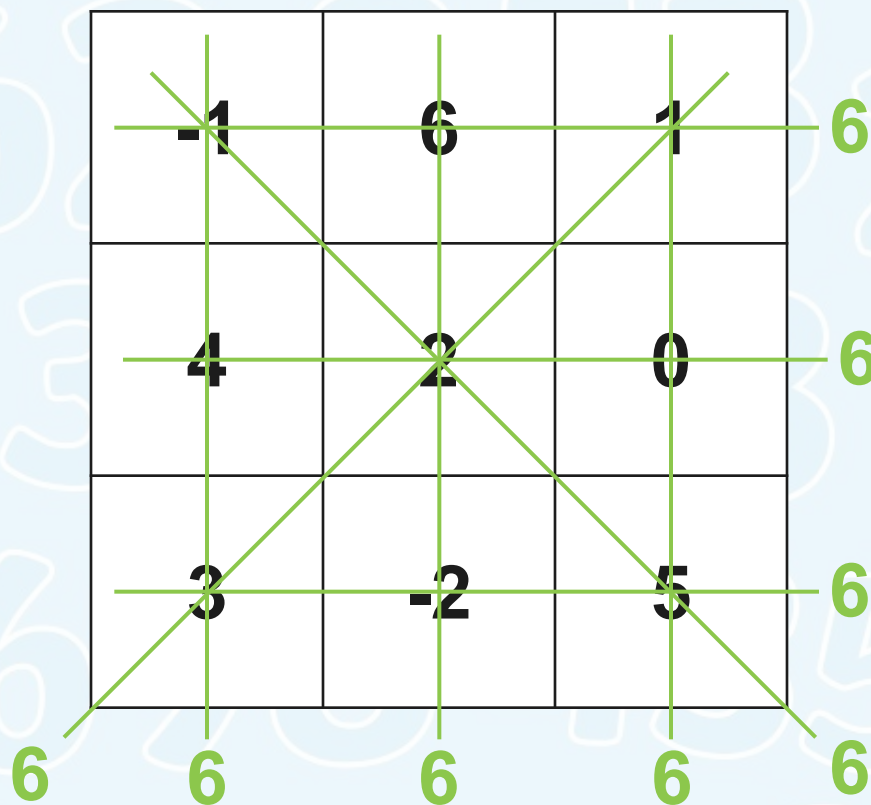
# Magic

## Negatives



Look at this magic square made of negative numbers.

Can you spot any patterns in the rows, columns or diagonals?



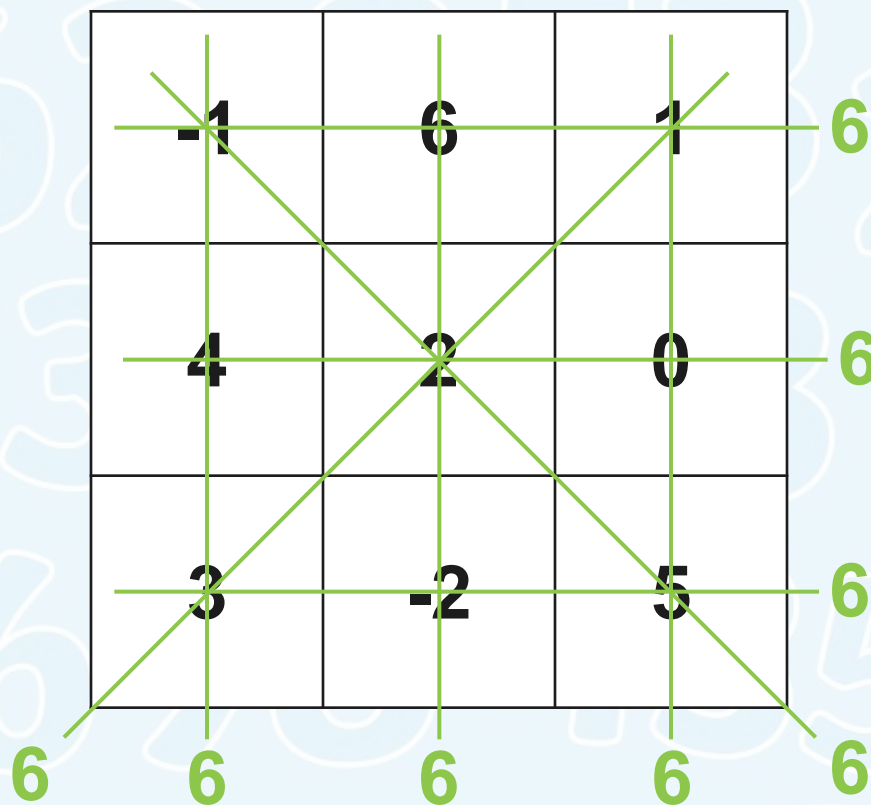


# Magic



The totals of each row, column and diagonal are equal.

They all add up to the same amount.





# Magic Negatives

Can you complete the magic squares on the **Magic Negatives Activity Sheet** so that the totals of each row, column and diagonal are equal? You can use negative numbers and you can use each number more than once.

## Magic Negatives

I can compare and order negative numbers in context.

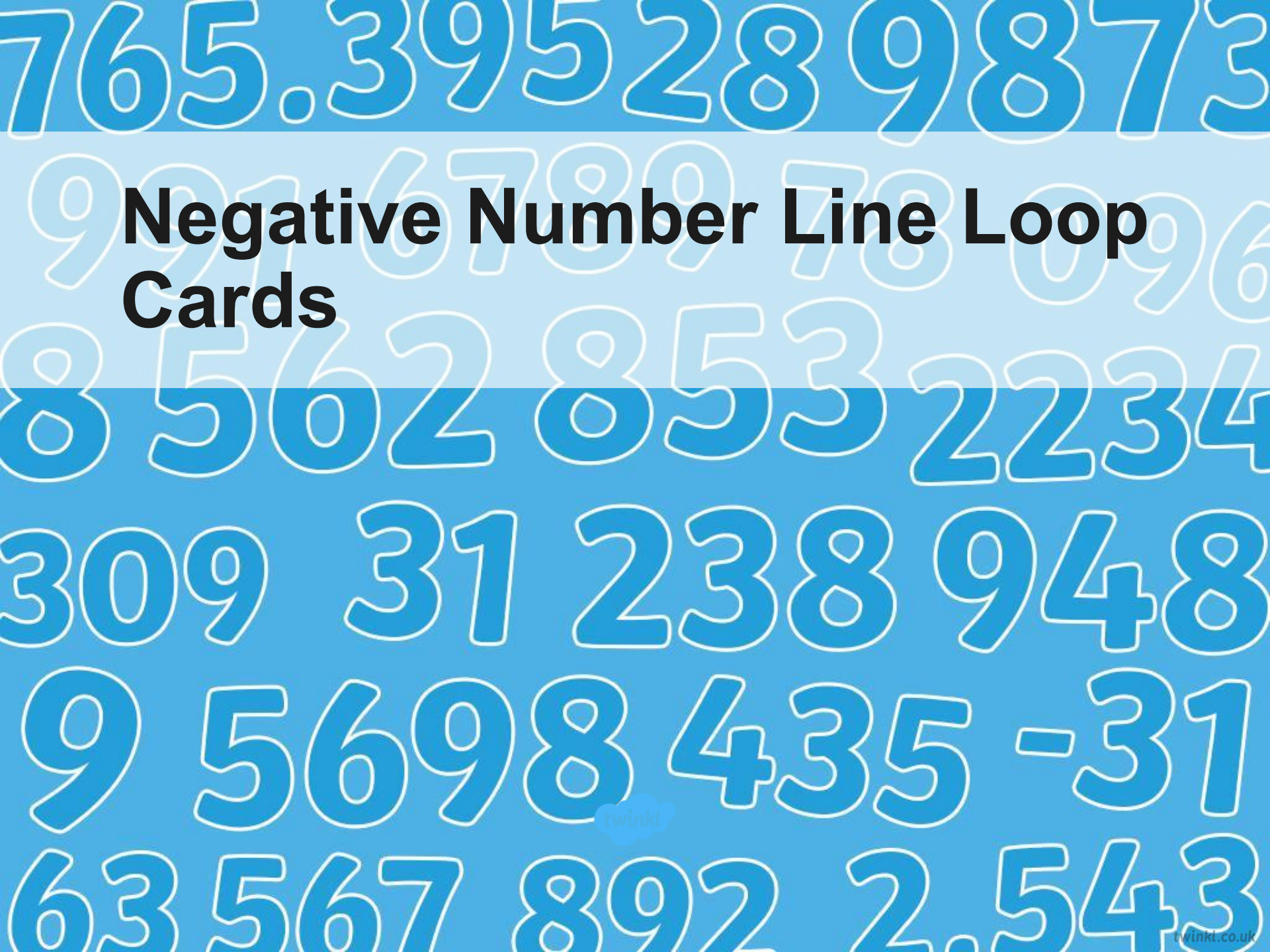
Can you solve these magic squares involving negative numbers?

All the rows, columns and diagonals must have the same total. You can use numbers more than once.

	1		-3	-4		-1		
-5	-1	3	2		-6		-4	-2
2			-5			-5		-7



# Negative Number Line Loop Cards



# Negative Number Line Loop Cards

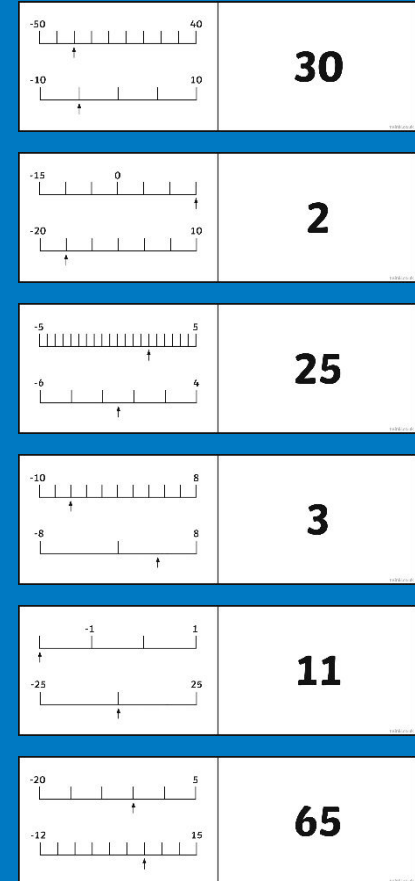


On the left side of your loop card, you will see two number lines. Each number line has an arrow pointing to it. Work out the number each arrow is pointing to and the difference between the two numbers.

On the right side of your loop card, you will see a difference.

I will choose one person to stand up and read out their difference. If the difference shown on your number lines matches this, stand up! Then, read out your difference.

Can you get all the way round the class, matching the differences shown on the number lines?





765.395289873

991 6789 78 096

8 562 853 2234

309 31 238 948

9 5698 435 -31

63 567 892 2.543

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