

# Cupcakes recipe



There are lots of daily activities that use numbers. Baking and cooking use a range of number-related skills such as measuring and time management. Why not have a go at making these cupcakes and notice the **#EverydayMaths** skills it requires?

Here is a recipe for 12 cupcakes:

## Ingredients

### For the cakes:

110g softened butter  
110g golden caster sugar  
2 large eggs  
 $\frac{1}{2}$  tsp vanilla extract  
110g self-raising flour

### For the buttercream:

150g softened butter  
300g icing sugar  
1 tsp vanilla extract  
3 tbsp milk  
Food colouring paste of your choice (optional)

## Method

1. Heat oven to 180C/160C fan/gas 4 and fill a 12 cupcake tray with cases. Using an electric whisk beat the butter and sugar together until pale and fluffy, then whisk in the eggs one at a time, scraping down the sides of the bowl after each addition. Add the vanilla, flour and a pinch of salt, whisk until just combined then spoon the mixture into the cupcake cases.
2. Bake for 15 mins until golden brown and a skewer inserted into the middle of each cake comes out clean. Leave to cool completely on a wire rack.
3. To make the buttercream, whisk the butter until super soft then add the icing sugar, vanilla extract and a pinch of salt. Whisk together until smooth (start off slowly to avoid an icing sugar cloud) then beat in the milk. If you want colour, stir in the food colouring now. Spoon or pipe onto the cooled cupcakes.

- Talk about the abbreviations - what does 'g' mean?
- How many grams in a kilogram?
- How much does the packet of caster sugar weigh?
- How much do you think 1 spoon of sugar would weigh?
- What is the difference between 'tsp' and 'tbsp'?
- Would it make a difference if you muddled them up?
- This recipe makes 12 cupcakes - how many would each member of your family get?
- If you wanted to have a party, what would be the ingredients for 24 cakes?
- How many cakes could I make if I only had 55g/2oz of butter?

**Try the recipe!**

Brought to you by



Founding supporter



[numeracyday.com](https://www.numeracyday.com)  
**#NationalNumeracyDay**

# Magical mind reading

13th May 2020

National  
Numeracy  
Day

## Think of a number.

Double it.

Add 10.

Halve it.

Take away your  
original number.

Think hard about the  
number you have left...

**I think I can read  
your mind...**

**Is your answer 5?**

## Can you work out how it's done?

Experiment by starting with different numbers.

You might find choosing zero as your  
number helps you see what's going on.

Some people find writing down the  
answers and looking for a pattern helps.

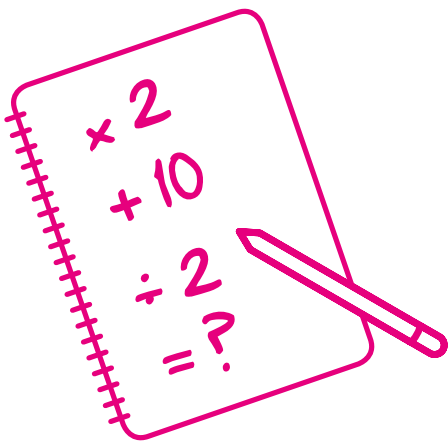
What about using buttons or beads or  
counters to represent your numbers?

Thinking about 'opposite' calculations could  
help too. What is the opposite of adding?  
What is the opposite of doubling?

Finding it hard? That's a good sign!  
Stretching your brain with tricky problems  
is a great way to develop your maths skills!

Now follow the same steps and amaze  
your friends and family by telling them  
what number they are thinking of!

You are practising addition, subtraction,  
doubling and halving. But you are also using  
logic and problem-solving skills when you  
are trying to figure out how it works.



Brought to you by



Founding supporter



[numeracyday.com](https://www.numeracyday.com)  
[#NationalNumeracyDay](https://twitter.com/NationalNumeracyDay)

# How to handle percentages

13th May 2020

National  
Numeracy  
Day

A monthly train ticket costs £250.00. The price increases by 10%. **What's the new price?**

---

## Step 1:

Divide £250 by 100 to find 1%  
 $£250 \div 100 = £2.50$

---

## Step 2:

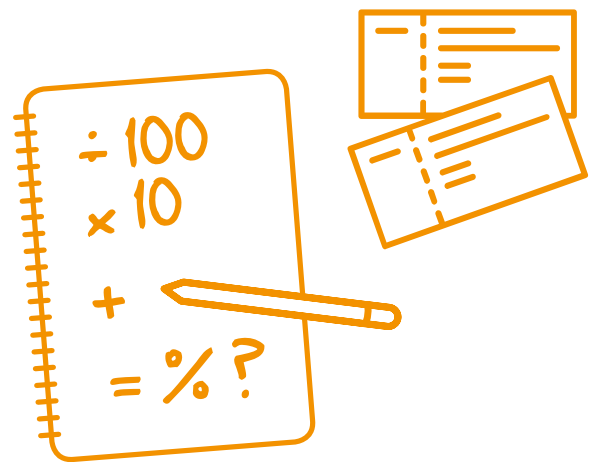
Multiply £2.50 by 10 to find 10%  
 $£2.50 \times 10 = £25$

---

## Step 3:

Add this increase to the original to get the new price  
 $£250 + £25 = £275$

**There are many ways to work out percentages. This is just one example that you can use every day.**



Brought to you by

 National  
Numeracy

Founding supporter

 KPMG

[numeracyday.com](https://www.numeracyday.com)  
#NationalNumeracyDay

# Spotting the best deal

13th May 2020

National Numeracy Day

Take a look at the prices of three packs of the same coffee.

**Which is the best value?**

- a) **750g for £4.50**
- b) **500g for £3.00**
- c) **1000g for £6.00**



Brought to you by



Founding supporter



[numeracyday.com](https://www.numeracyday.com)  
#NationalNumeracyDay

# Special offer 1

13th May 2020

National  
Numeracy  
Day

When you go to the shops do you ever look for special offers like two for the price of one? Or buy one, get one half price?

## See how many special offers you can find.

Look in a shop or online – are they all good bargains? Sometimes offers are not as good as they seem.

For example, two 1 litre bottles of squash for £5.00 when a 2 litre bottle costs £4.99!

Can you find any interesting offers?

Can you choose something you like to eat or drink and make up a good special offer for it?



Brought to you by



Founding supporter



[numeracyday.com](https://www.numeracyday.com)  
#NationalNumeracyDay

# Special offer 2

13th May 2020

National  
Numeracy  
Day

When you go to the shops do you ever look for special offers like two for the price of one? Or buy one, get one half price?

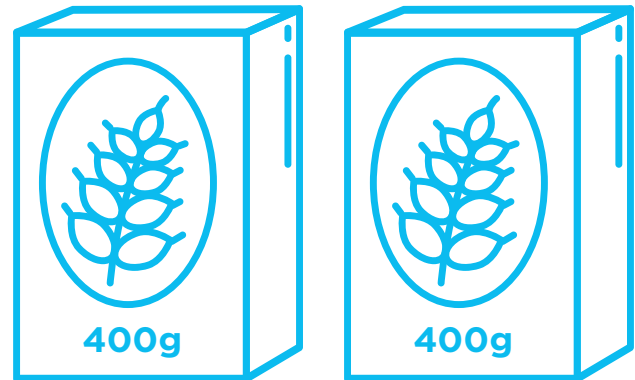
## See how many special offers you can find.

Look in a shop or online – are they all good bargains? Sometimes offers are not as good as they seem.

For example, two 400g boxes of cereal for £3.00 when an 800g box costs £2.99!

Can you find any interesting offers?

Can you choose something you like to eat or drink and make up a good special offer for it?



Brought to you by

 National  
Numeracy

Founding supporter

 KPMG

[numeracyday.com](https://www.numeracyday.com)  
#NationalNumeracyDay

# Line up



This is a fun activity that will get you thinking and will also let you find out a little more about your colleagues! We would love to see your photos or videos of this activity so remember to share on social using **#numberspeople**

You will need a group of colleagues (the more the better) and enough space for everyone to line up.



The idea is to line everyone up in order of birthdays – with January 1st at one end of the line and December 31st at the other. We are not interested in the year that people were born.

**The catch is that nobody is allowed to talk (at least to start with).**

Start by agreeing where the two ends of the line will go, and then give everyone a chance to go to their (estimated) place in the line **without saying a word or giving any other clues.**

Once the line is set up, everybody says their birthday out loud, starting at the 'January' end of the line and working across to December.

If the order is correct – job done, take a photo!

If some of the people are in the wrong order you now get another chance to organise your line: again, this needs to be done **in complete silence.** People are now allowed to suggest where people should go by pointing, but there is still strictly no talking.

Once you are happy with your reorganised line, everyone says their birthday again. Repeat the process until you have the right order!

Try the same activity but line up according to who lives, geographically, the furthest from this room – with the closest at one end and the furthest away at the other.

***What other lines can you create? Get creative!***

Brought to you by



Founding supporter



[numeracyday.com](https://www.numeracyday.com)  
**#NationalNumeracyDay**

Why not set up a quiz using the following questions:

## Geography numbers

### 1. Which London Underground line has the most stations?

- a) The Central Line
- b) The Northern Line
- c) The District Line

### 2. How many steps are there in New York City's Empire State Building?

- a) 1576 b) 2021 c) 961

### 3. How many formally recognised countries start with the letter A (in English)?

- a) 10 b) 11 c) 8

### 4. How many main islands are there in the Canary Islands?

- a) 9 b) 4 c) 7

### 5. How long is the Great Wall of China in kilometres?

- a) 2040km b) 10,922km c) 21,196km

## ANSWERS

1. c: The District Line has 60 stations, the most of any London Underground line.

2. a: There are 1576 steps from the bottom to the top of the Empire State Building.

3. b: There are 11 countries in the world beginning with the letter A. They are: Afghanistan, Albania, Algeria, Andorra, Angola, Antigua and Barbuda, Argentina, Armenia, Australia, Austria and Azerbaijan.

4. c: There are 7 main islands in the Canaries: Gran Canaria, Fuerteventura, Lanzarote, Tenerife, La Gomera, La Palma and El Hierro.

5. c: The Great Wall of China is 21,196km long.

## Quiz sheet 1

Brought to you by



Founding supporter





# Quiz

13th May 2020

National  
Numeracy  
Day

## Music numbers

1. According to the song “Seasons of Love” from the musical Rent, how many minutes are there in a year?

a) 5,250,600 b) 525,600 c) 5,260

2. On which Adele album would you find the song “Hello”?

a) 19 b) 21 c) 25

3. What do you get if you add together the number of members of the Spice Girls, Little Mix and Girls Aloud?

a) 15 b) 13 c) 14

4. Who sung the song “Eight Days a Week”?

a) Abba b) The Beatles  
c) The Rolling Stones

5. Divide, Multiply and Plus are all albums by which British artist?

a) Ed Sheeran b) Sam Smith c) Olly Murs

## ANSWERS

1. b: 525,600. This is factually correct – there are 525,600 minutes in a non-leap year.

2. c: 25.

3. c: 14. The Spice Girls have 5, Little Mix have 4 and Girls Aloud had 5.

4. b: the Beatles.

5. a: Ed Sheeran.

## Quiz sheet 2

Brought to you by



Founding supporter



[numeracyday.com](https://www.numeracyday.com)  
#NationalNumeracyDay

## General knowledge numbers

**1. How many points would you get in Scrabble if you added together the first letter of the words National Numeracy and Day?**

a) 3 b) 4 c) 7

**2. How many sides does a hendecagon have?**

a) 11 b) 13 c) 17

**3. In what year was the book 1984 by George Orwell published?**

a) 1939 b) 1949 c) 1983

**4. How many white pawns are there on a standard chess board at the start of a game?**

a) 8 b) 12 c) 16

**5. How many people would be at a party if each of the main characters from the TV show F.R.I.E.N.D.S brought 7 friends with them?**

a) 30 b) 42 c) 48

## ANSWERS

1. b: 4. The letters N are each worth 1 point and D is worth 2 points.

2. a: A hendecagon is an 11-sided polygon.

3. b: 1949.

4. a: 8. There are 8 white pawns and 8 black pawns at the start of a standard game of chess.

5. c: 48. There would be 6 main characters, plus 42 friends.

## Quiz sheet 3

Brought to you by



Founding supporter



## History numbers

**1. Around which sea are the majority of the 7 Wonders of the Ancient World located?**

- a) the Mediterranean Sea
- b) the Aegean Sea c) the Dead Sea

**2. Which King Richard was also called Richard the Lionheart?**

- a) Richard I b) Richard III c) Richard IV

**3. What do the Roman numerals XCIX represent?**

- a) 71 b) 99 c) 119

**4. How many years did the Hundred Years' War actually last?**

- a) 95 b) 116 c) 200

**5. How many years were there between the start of the First World War and the start of the Second World War?**

- a) 20 b) 22 c) 25

## ANSWERS

- 1. a: the Mediterranean Sea.
- 2. a: Richard I.
- 3. b: 99.
- 4. b: 116 years.
- 5. c: 25

## Sport numbers

**1. If your football team wins 5 games in the Premier League, how many points does it get?**

a) 20 b) 15 c) 30

**2. How many points does a Formula 1 team score in a race if the drivers finish in 1st and 2nd place?**

a) 43 b) 25 c) 18

**3. The 1970 FA Cup Final was tied, with Chelsea beating Leeds United 2 - 1 in the replay. What was the UK television audience for the replay?**

a) 28,000,000 b) 16,500,000  
c) 8,500,000

**4. How many basic ballet positions are there?**

a) 3 b) 5 c) 8

**5. According to a recent report, the average annual pay in the Women's Super League in England is £26,752 - while their male colleagues in the Premier League earn an average of around £50,800 per week. Which of these is the best estimate of the ratio of their salaries?**

a) 20:1 b) 50:1 c) 100:1

## ANSWERS

1. b: 15 points - 3 points per game.

2. a: 43 points.

3. a: Incredibly, about half the UK population tuned in to watch what turned out to be a bruising physical encounter. A modern referee has suggested that the same level of physicality today would result in six red cards and 20 yellows!

4. b: There are 5 basic ballet positions.

5. c: 100:1. According to the same report, Premier League footballers are by no means the highest paid team players on the planet. That distinction goes to the basketball players of the American NBA, who earn an average of about £5.5 million per year - about 96 times what their female equivalents in the WNBA are paid.

## Quiz sheet 5

**Team name:** \_\_\_\_\_

Answer sheet 1 (circle your chosen answer)

### Geography numbers

**1. Which London Underground line has the most stations?**

- a) The Central Line
- b) The Northern Line
- c) The District Line

**2. How many steps are there in New York City's Empire State Building?**

- a) 1576
- b) 2021
- c) 961

**3. How many formally recognised countries start with the letter A (in English)?**

- a) 10
- b) 11
- c) 8

**4. How many main islands are there in the Canary Islands?**

- a) 9
- b) 4
- c) 7

**5. How long is the Great Wall of China in kilometres?**

- a) 2040km
- b) 10,922km
- c) 21,196km

### Music numbers

**1. According to the song "Seasons of Love" from the musical Rent, how many minutes are there in a year?**

- a) 5,250,600
- b) 525,600
- c) 5,260

**2. On which Adele album would you find the song "Hello"?**

- a) 19
- b) 21
- c) 25

**3. What do you get if you add together the number of members of the Spice Girls, Little Mix and Girls Aloud?**

- a) 15
- b) 13
- c) 14

**4. Who sang the song "Eight Days a Week"?**

- a) Abba
- b) The Beatles
- c) The Rolling Stones

**5. Divide, Multiply and Plus are all albums by which British artist?**

- a) Ed Sheeran
- b) Sam Smith
- c) Olly Murs

**Team name:** \_\_\_\_\_

Answer sheet 2 (circle your chosen answer)

## General knowledge numbers

1. How many points would you get in Scrabble if you added together the first letter of the words National Numeracy and Day?

- a) 3    b) 4    c) 7

2. How many sides does a hendecagon have?

- a) 11    b) 13    c) 17

3. In what year was the book 1984 by George Orwell published?

- a) 1939    b) 1949    c) 1983

4. How many white pawns are there on a standard chess board at the start of a game?

- a) 8    b) 12    c) 16

5. How many people would be at a party if each of the main characters from the TV show F.R.I.E.N.D.S brought 7 friends with them?

- a) 30    b) 42    c) 48

## History numbers

1. Around which sea are the majority of the 7 Wonders of the Ancient World located?

- a) the Mediterranean Sea  
b) the Aegean Sea  
c) the Dead Sea

2. Which King Richard was also called Richard the Lionheart?

- a) Richard I  
b) Richard III  
c) Richard IV

3. What do the Roman numerals XCIX represent?

- a) 71    b) 99    c) 119

4. How many years did the Hundred Years' War actually last?

- a) 95    b) 116    c) 200

5. How many years were there between the start of the First World War and the start of the Second World War?

- a) 20    b) 22    c) 25

**Team name:** \_\_\_\_\_

Answer sheet 3 (circle your chosen answer)

## Sport numbers

**1. If your football team wins 5 games in the Premier League, how many points does it get?**

- a) 20    b) 15    c) 30

**2. How many points does a Formula 1 team score in a race if the drivers finish in 1st and 2nd place?**

- a) 43    b) 25    c) 18

**3. The 1970 FA Cup Final was tied, with Chelsea beating Leeds United 2 - 1 in the replay. What was the UK television audience for the replay?**

- a) 28,000,000  
b) 16,500,000  
c) 8,500,000

**4. How many basic ballet positions are there?**

- a) 3    b) 5    c) 8

**5. According to a recent report, the average annual pay in the Women's Super League in England is £26,752 – while their male colleagues in the Premier League earn an average of around £50,800 per week. Which of these is the best estimate of the ratio of their salaries?**

- a) 20:1    b) 50:1    c) 100:1