

# Wednesday 21st January

## Morning Challenge

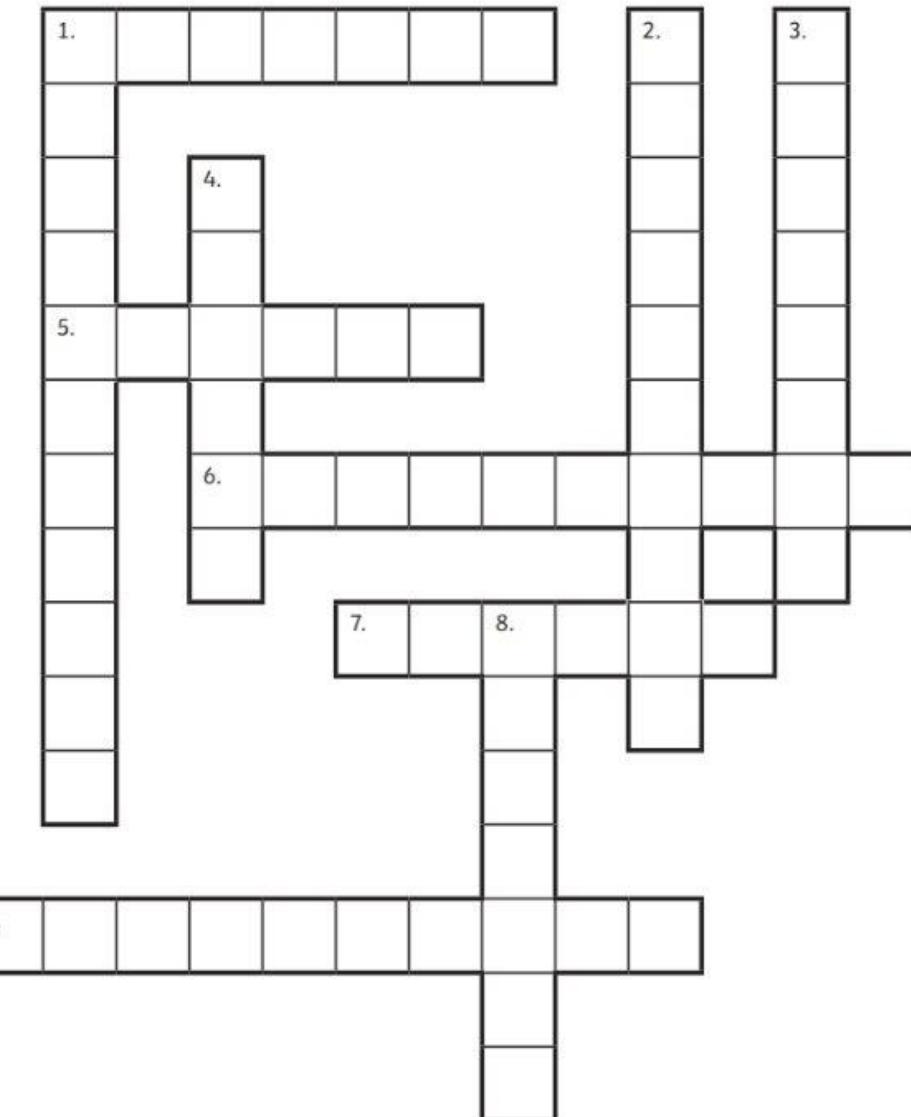
### Spelling Crossword

#### Across

1	Better or greater than what is usual.
5	An adjective relating to a race of people.
6	Reclusive; not enjoying the company of others.
7	An adjective relating to the face.
9	Having a good or favourable effect; helpful.

#### Down

1	Shallow, slight or insignificant.
2	Made or produced by human beings - not natural.
3	Approved by an authority.
4	Friendly; enjoying the company of others.
8	The most important part; vital.



Wednesday 21st January

TBAT: Add suffixes beginning with vowel letters to words ending in -fer.

Fill in the missing letters of these spellings.

1. R \_\_ f \_\_ r \_\_\_\_\_

2. R \_\_\_\_\_ f e \_\_\_\_\_ a l

3. R \_\_ f \_\_\_\_\_ e d

**Challenge** – Use one of the spellings words in a sentence with a relative clause.

Wednesday 21st January

TBAT: Add suffixes beginning with vowel letters to words ending in -fer.

Sort the words into the correct column.

referring  
referred  
referral  
reference  
referee  
preferring  
preferred  
preference  
transferring  
transference

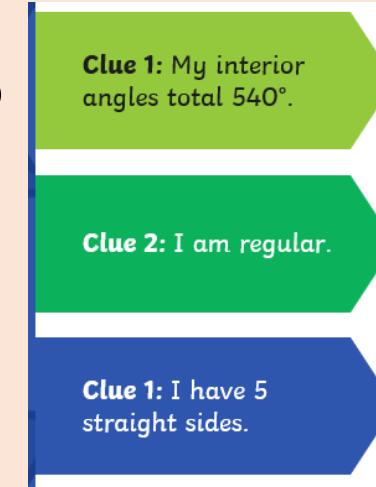
Stressed

Unstressed

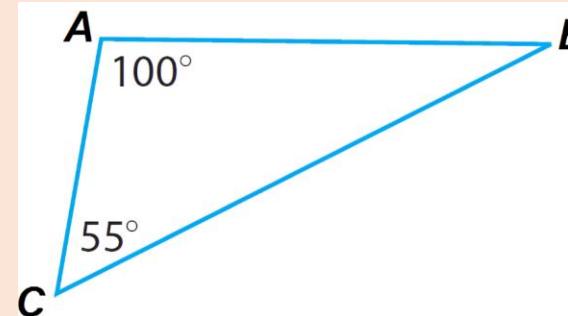
**Challenge -**  
Write a sentence that contains a spelling word and brackets for parenthesis.

TBAT: identify and recognise the properties of a circle3 in 3

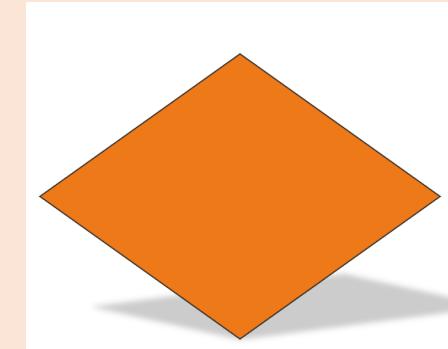
1. Guess the shape from the description?



2. What is the value of B?



**Challenge – What is this shape? Describe it.**

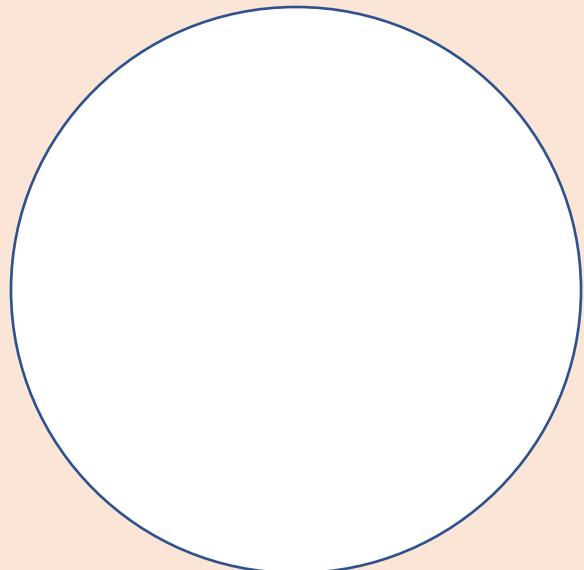


3. What is  $6903 \times 8$  ?

21.01.26

TBAT: identify and recognise the properties of a circle

What do you know about the shape below?



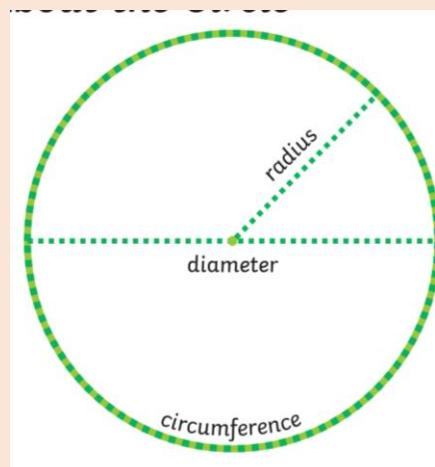
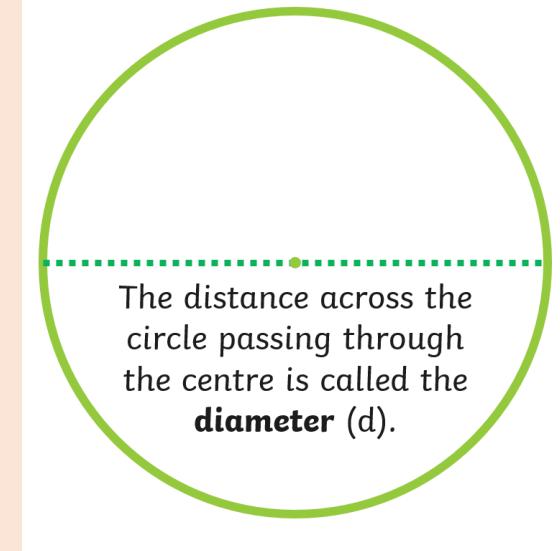
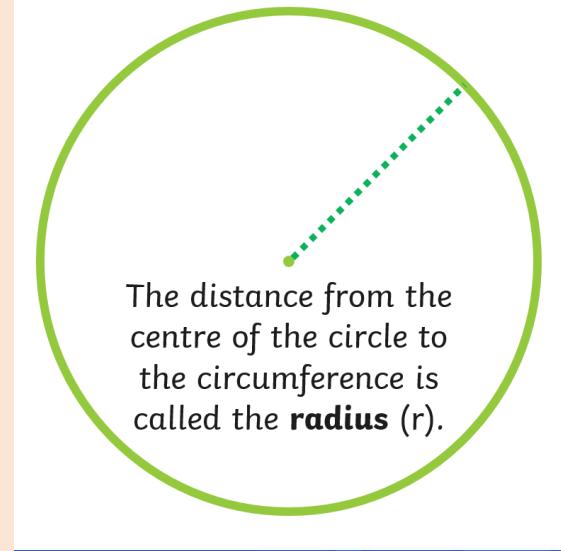
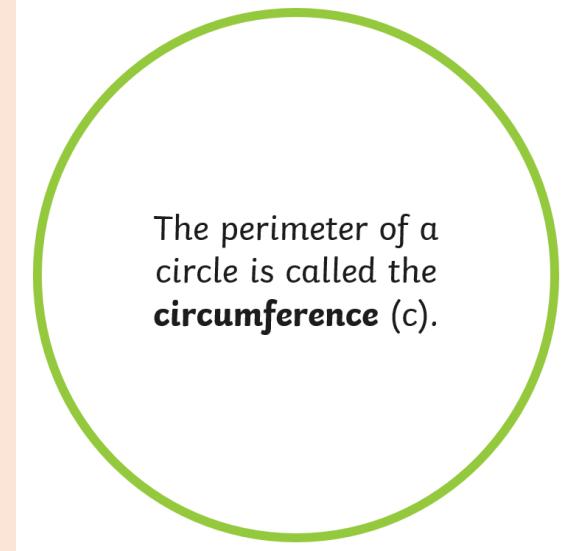
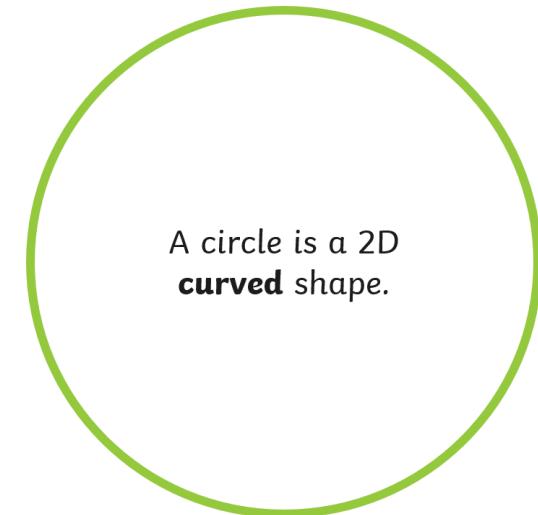
**How many edges does  
it have?**

**How many vertices  
does it have?**

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# TBAT: identify and recognise the properties of a circle

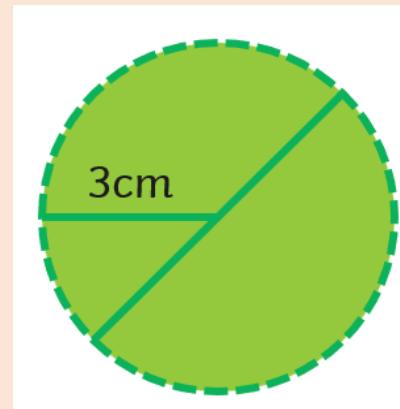
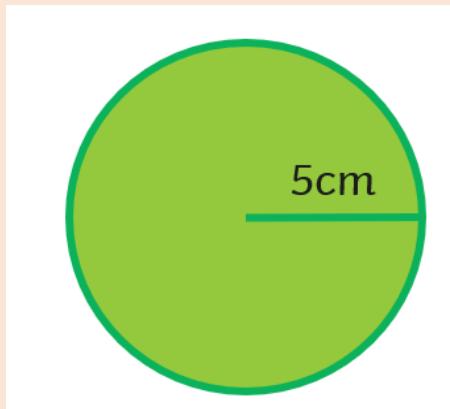
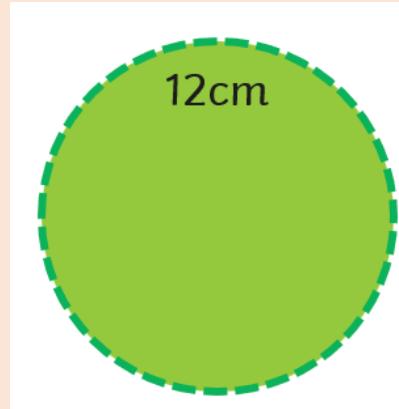
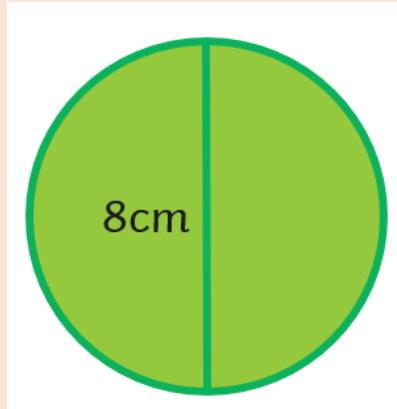
## Fact check.



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TBAT: identify and recognise the properties of a circle

Match each shape to its correct description.



**B**

**My  
diameter  
is 10cm.**

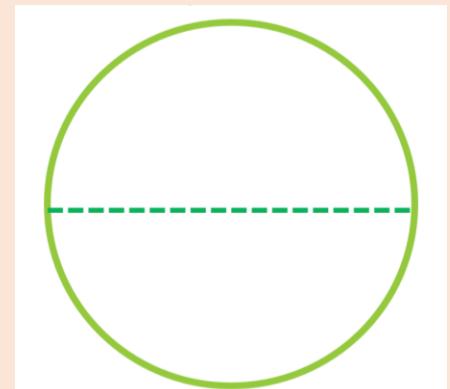
**My  
diameter  
is 8cm.**

**G**

**My  
circumference  
is 12cm.**

**My  
radius is  
3cm.**

**Challenge – This circle has  
a diameter of 20cm. What  
is the radius?**



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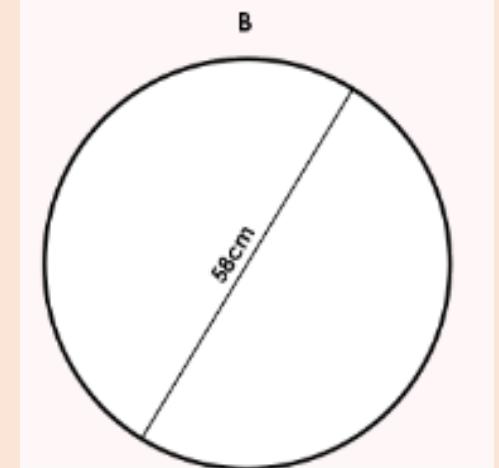
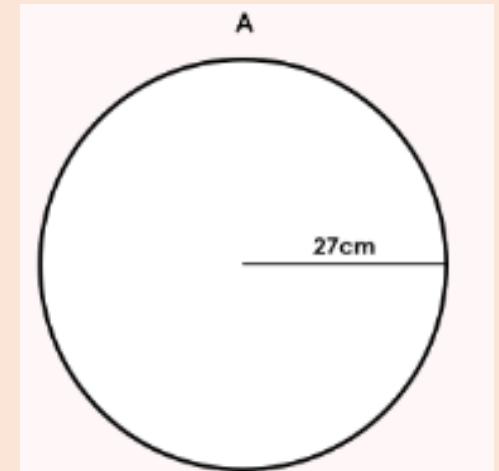
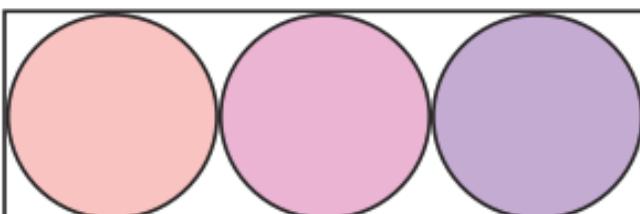
TBAT: identify and recognise the properties of a circle.

Which statements about the circles are true?

- The diameter of circle B is greater than the diameter of circle A.**
- Circle A has a diameter of 54cm.**
- The total of the diameters of both circles is 114cm.**
- The radius of circle B is less than 25cm.**

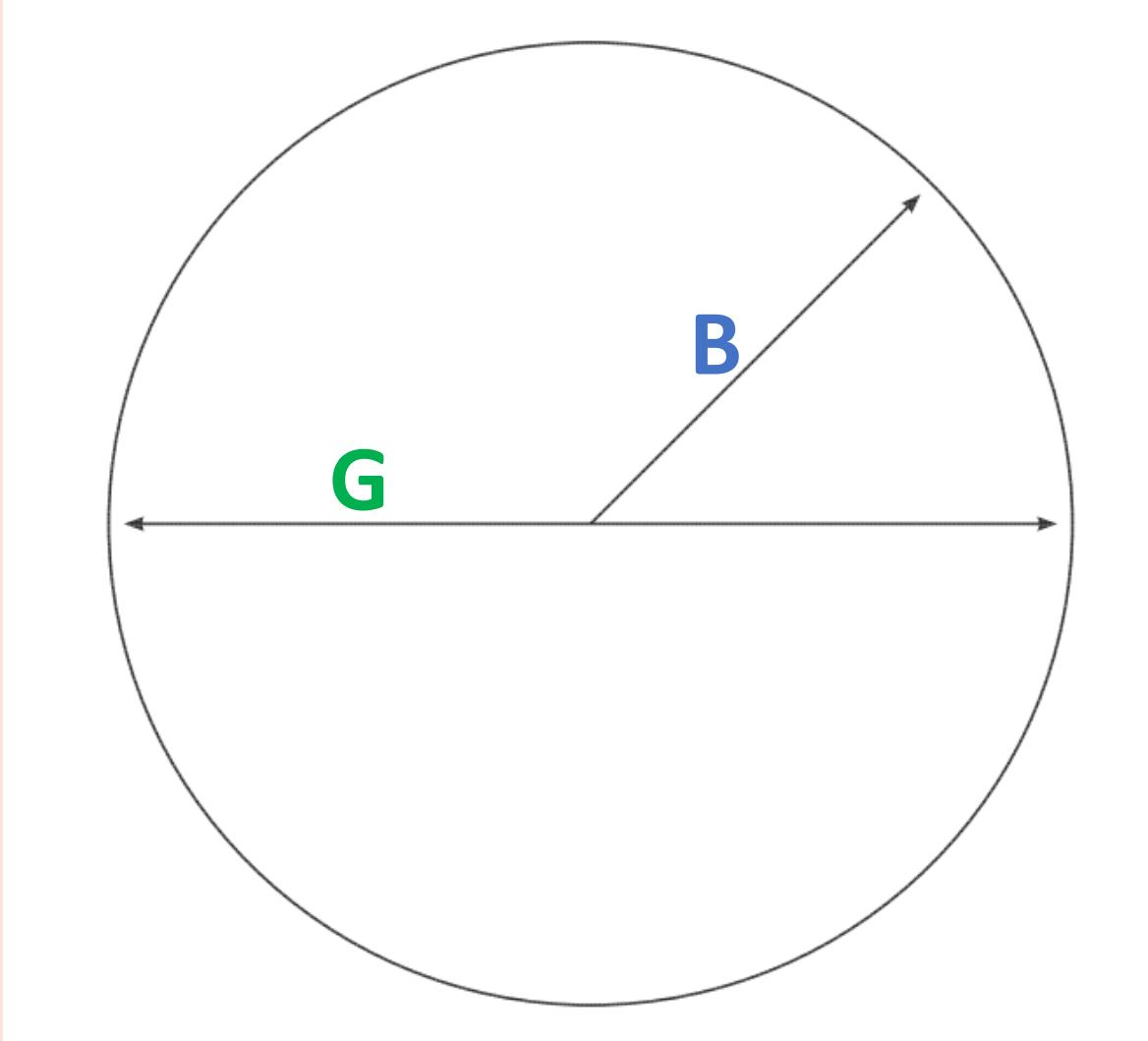
This design is made from a rectangle and three identical circles. The length of the rectangle is 15cm. What is the radius of each circle? Show your working out.

not to scale



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TBAT: identify and recognise the properties of a circle

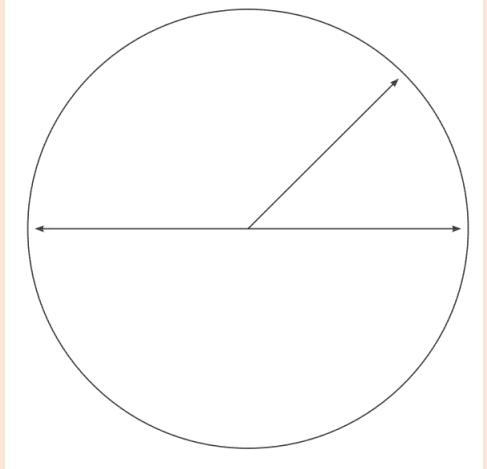


**Challenge – This circle has a radius of 25cm. What is the diameter? Do you know how to work out the circumference?**

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TBAT: identify and recognise the properties of a circle

## 1. Label this circle.

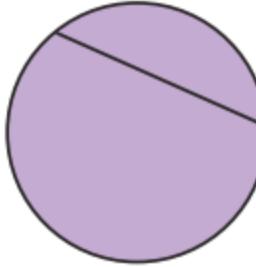


## 2. Define the radius, diameter and circumference.

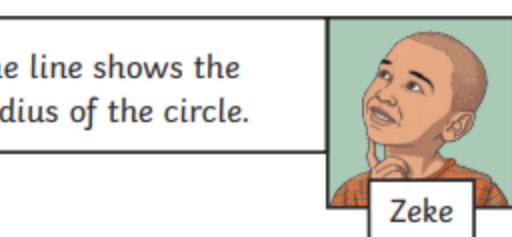
Radius	Diameter
15m	
	36cm
	32.5m
17.5cm	

## Challenge

Do you agree with each child's statement? Explain why.



The line shows the diameter of the circle.



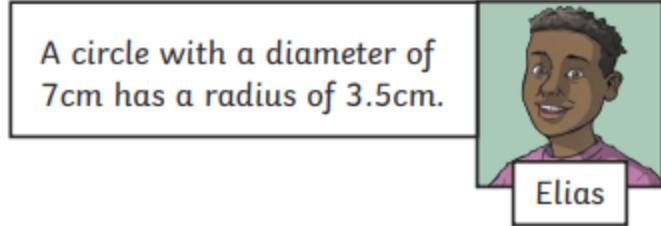
The line shows the radius of the circle.

## Mastery Challenge

Is each statement true or false? Prove it!



The radius of a circle is twice its diameter.



A circle with a diameter of 7cm has a radius of 3.5cm.



The diameter of a circle is always greater than the radius.

## Mastery with Greater Depth

The diameter of circle A is  $\frac{1}{3}$  of the radius of circle B. What could the diameters of circles A and B be to make this statement true?

Find five possible answers.

# Wednesday 21st January

## TBAT: write a suspense story.

Which of these sentences uses **brackets** accurately? Tick **one**.

Susan had played for three teams (Bradfield Rovers, Greenside Broncos and Hilltop Rhinos) before signing for her current club.

Susan had played for (three teams) Bradfield Rovers, Greenside Broncos and Hilltop Rhinos before signing for her current club.

Susan had played for three teams Bradfield Rovers, Greenside Broncos and Hilltop Rhinos (before signing for her current club).

Susan had played for three teams (Bradfield Rovers, Greenside Broncos) and Hilltop Rhinos before signing for her current club.

**Challenge – Write a sentence in the active voice. Change it to passive.**

Which of these sentences needs a **question mark**? Tick **one**.

Pass me the ball

This sentence doesn't need a question mark, does it

The match will last for ninety minutes

He was named as captain

Write a **synonym** in the box to replace the underlined word so that the sentence maintains its meaning.

Exhausted, Susan heard the final whistle and collapsed on the pitch.

Wednesday 21st January

TBAT: write a suspense story.

**What are the 5 main events from Alma? Explain in 30 seconds.**

**How can we build suspense in our writing? Explain in 30 seconds.**

**How many verbs can you think of to explain how Alma entered the shop?**

This sentence has five words. Here are five more words. Five-word sentences are fine. But several together become monotonous. Listen to what is happening. The writing is getting boring. The sound of it drones. It's like a stuck record. The ear demands some variety.

Now listen. I vary the sentence length, and I create music. Music. The writing sings. It has a pleasant rhythm, a lilt, a harmony. I use short sentences. And I use sentences of medium length. And sometimes when I am certain the reader is rested, I will engage him with a sentence of considerable length, a sentence that burns with energy and builds with all the impetus of a crescendo, the roll of the drums, the crash of the cymbals—sounds that say listen to this, it is important.

Wednesday 21st January

TBAT: write a suspense story.

Continue to read up until Alma tries to enter the shop.

Now read the second example of this paragraph.

Talk partners: Which do you prefer and why?

Although one is shorter than the other, what are the main events that occur in both examples?

Her jaw fell open- there were so many names! She picked up a piece of the chalk. With a flourish, she wrote her name: Alma. She stood back once more to admire her handwriting when, out of nowhere, she felt a sudden chill up her spine.

She turned cautiously and at that moment, she saw the doll. Puzzled, she ambled over to the shop window, where she then stood motionless. Realising the similarities between herself and the doll, she pressed her now numb face against the window for a closer look. She was right. The doll was identical: pink fluffy bobble hat on their head; pink mittens to match; black, covered in snow, trousers and brown wavy hair. She ran to the door. She gripped the handle and pulled as hard as she could but it wouldn't budge. In annoyance, Alma grabbed a handle of snow and aimed at the door. Frustrated, she stormed away.

Wednesday 21st January

TBAT: write a suspense story.

Her jaw fell open- there were so many names! She picked up a piece of the chalk. With a flourish, she wrote her name: Alma. She stood back once more to admire her handwriting when, out of nowhere, she felt a sudden chill up her spine.

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**Identify synonyms within this text.**

**Challenge: Why do you think synonyms have been used instead of repeating the same words?**

Wednesday 21st January

TBAT: write a suspense story.

- 1) Alma seeing the wall and writing her name.
- 2) She spots the doll in the window.

- 1) **She sees the doll, what does she do?**
- 2) **Explain in detail what makes this doll different.**

Steps to success:

Descriptive vocabulary- including a range of synonyms (not repeating the same words)

Varied sentence openers

Range of sentence structures: some short sentences and some multi clause using conjunctions or ;

Paragraphs to separate your ideas where appropriate

Third person

Past tense

Parenthesis – this must give useful additional information

Conjunctions- coordinating and subordinating

Short sentences

Relative clause

Literary language: simile, metaphor, expanded noun phrase etc.

**Challenge - Semi-colon to link two closely related independent clauses**

She turned cautiously, her heart pounding in her chest. At that moment, she saw the doll. Her breath caught in her throat as she ambled over to the shop window, her steps slow and deliberate. She stood motionless, her eyes wide with disbelief. The doll was eerily similar to her. She pressed her now numb face against the cold glass for a closer look. She was right. The doll was identical: pink fluffy bobble hat perched on its head; pink mittens to match; black trousers dusted with snow, and brown wavy hair. Panic surged through her as she ran to the door. She gripped the handle and pulled with all her might, but it wouldn't budge. Desperation clawed at her as she grabbed a handful of snow and hurled it at the door. Frustrated and defeated, she stormed away, her mind racing with unanswered questions.

Wednesday 21st January

KQ –Can I explain why Iona has become a modern centre of Christian pilgrimage?

Quick Quiz

1 A pilgrim is someone who goes on a ...

\_\_\_\_\_

2 Iona is an \_\_\_\_\_ off the coast of Scotland. (Fill in the blank)

3 The monastery at Iona was founded by ... (Tick **1** correct answer)

Saint Columba

Saint Aidan

Saint Patrick

Saint Joseph

4 For Celtic monks, a thin place was ... (Tick **1** correct answer)

a place that has thin vegetation

a place that is very remote

a place where the boundary between heaven and earth is thin

a place with an abbey

Wednesday 21st January

KQ –Can I explain why Iona has become a modern centre of Christian pilgrimage?

**What century was the Iona Abbey founded in?**

**Who attacked and destroyed the monastery of Iona?**

**When was the monastery attacked and destroyed?**

# Keywords

community

a group of people working or living together with a common vision

pilgrim

a person who journeys to a sacred place for religious reasons

service

the action of helping or doing work for someone

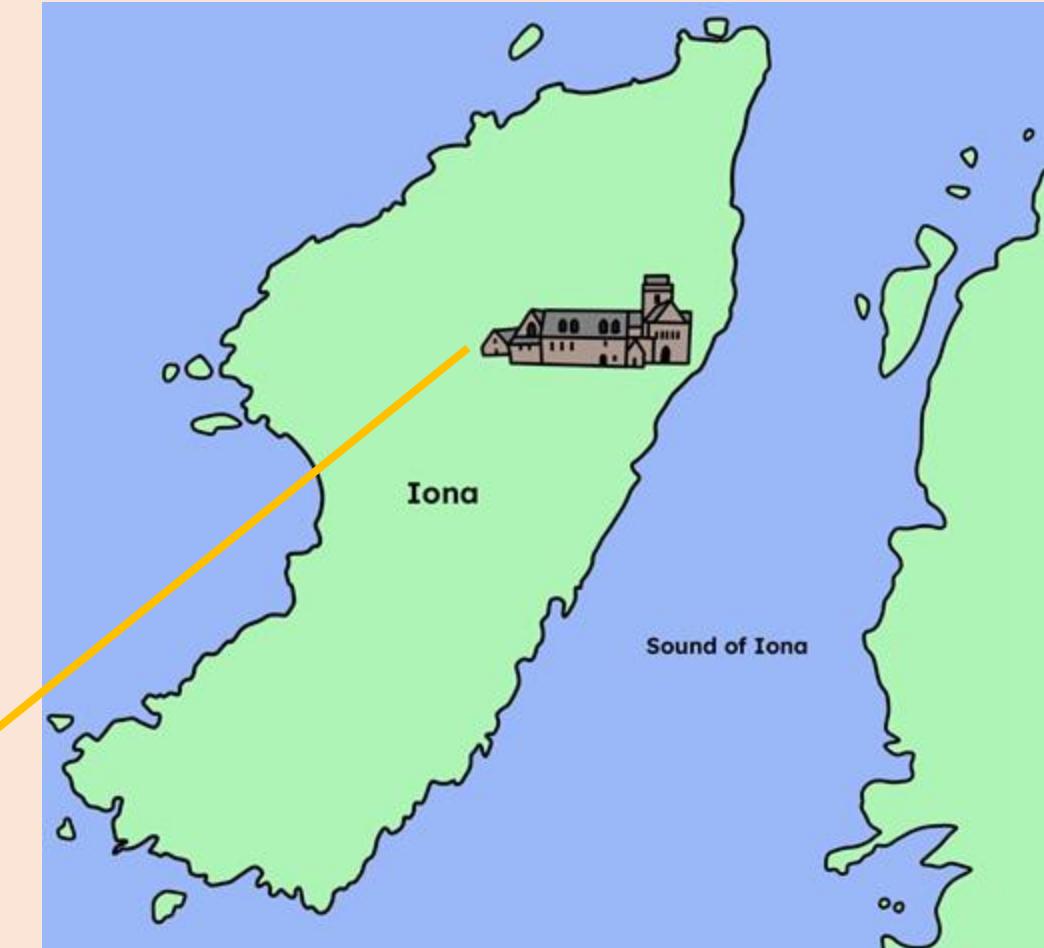
global

relating to the whole world

Iona is a remote island off the west coast of Scotland. It has been a place of Christian pilgrimage since St. Columba established the first monastery in 563 AD.

The Celtic monastery on Iona was attacked and destroyed by Vikings in the 800s.

The abbey now standing was built over the remains of Columba's monastery.



Fergus has a Christian worldview and goes to an Anglican church. He is a volunteer for the Iona **community**.



Fergus

The Iona **community** was reestablished in 1938 by the Reverend George MacLeod. The **community** was made up of volunteers.

They set about restoring the ruined abbey to its former glory to be a place of peace and social justice.

Why might people have volunteered to rebuild Iona?

This is Iona Abbey today.

Can you see ancient door frames and windows?

Can you see the Celtic cross?

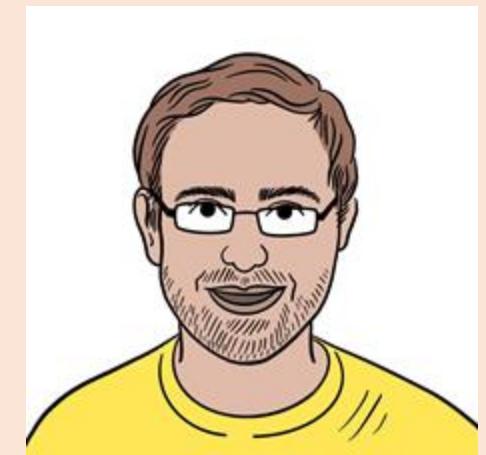
George MacLeod preserved the historic character of the abbey while making a beautiful space for worship and **community** life.



## Why was Iona restored?

Reverend George MacLeod aimed to restore the abbey and its monastic **community** as a centre for Christians from all denominations.

He saw the island as a 'thin place'. This is an idea from Celtic Christianity. It means the boundary between earth and heaven is thin. It is a place where people might encounter God.



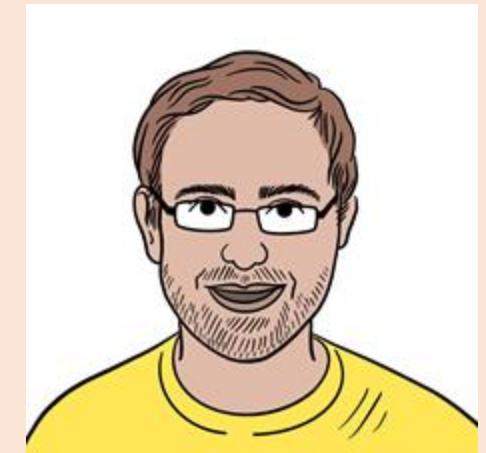
Fergus

## Why was Iona restored?

Restoring Iona was not just about rebuilding the stones and creating a beautiful abbey. He wanted to create a space that could include everyone.

His vision was a **global Christian community** working for peace and social justice linked to the island of Iona, but living all over the world.

Today, the Iona **community is global**. It is open to all who hold a Christian worldview.



Fergus

Danielle has a Christian worldview and she goes to a Roman Catholic church.



Danielle

I visited Iona last year as a **pilgrim**. To reach Iona everybody arrives by boat. The island looks magical as you approach.

When the boat docked, myself and other **pilgrims** were warmly welcomed by volunteers. Our bags were taken on the tractor which was very kind!

On arrival to the abbey, the pilgrims gather together in the refectory.



We were given a cup of tea and then shown to our accommodation.



Danielle

Iona refectory

## Fergus is a volunteer for the Iona **community**.

Once all the **pilgrims** settle into their rooms, it is time for dinner. A bell rings and the **pilgrims** and volunteers assemble together to enjoy the evening meal.

Eating a shared meal together is a central part of the pilgrimage to Iona. When we eat together we become a **community**, rather than a group of individuals.



Fergus

Fiona has a Christian worldview. She came to Iona after singing some Iona **community** songs in her church.



During the stay everyone is made part of a task team. This is a task like making food or even cleaning the toilets!

These tasks are a form of **service** to others. Serving others helps create **community** and reminds me that everyone at the abbey is equal.

After breakfast, we all headed to the abbey for morning prayer. Starting and ending the day with worship filled me with peace.

Fiona

## Danielle explains her experience of pilgrimage on Iona.



Danielle

On a Tuesday, **pilgrims** have the opportunity to participate in a pilgrimage around the island of Iona.

One place that was transformative for me was St. Columba's Bay. I was invited to pick up one of the stones. The stone represents a burden that you are carrying and throwing the stone symbolises being rid of that burden.

I could feel a weight lift from me when my stone hit the sea. Doing this together made me feel part of a **community**.

The Iona **community** was reestablished in 1938 by the Reverend George MacLeod.

The Iona **community** is a **global community** made up of people from many Christian denominations.

**Service** is a key aspect of staying at the abbey.

The Iona **community** works for peace and social justice.

Wednesday 21st January

KQ –Can I explain why Iona has become a modern centre of Christian pilgrimage?

Your tasks:

1) Explain why the Iona **community** was rebuilt.

You should include the following words in your answer:

Iona	<b>community</b>	Reverend George MacLeod
volunteers	abbey	Christian
<b>global</b>	peace	justice

## Challenge

Why Iona has become a modern centre of Christian pilgrimage. Give 1 reason that you think is the most important.

2) Complete the table

four things that a <b>pilgrim</b> on Iona may do during the day	How does that connect with <b>service</b> or <b>community</b> ?
1.	
2.	
3.	
4.	

# Wednesday 21st January

## KQ –Can I explain why Iona has become a modern centre of Christian pilgrimage?

### Exit Quiz

1 Choose three reasons why pilgrims might visit Iona today. (Tick 3 correct answers)

- to see the historical sites of St Columba and the abbey
- to connect with God in a thin place
- to enjoy a holiday with friends
- to spend time as part of a community

2 The Reverend George MacLeod wanted Iona to be a \_\_\_\_\_ community working for peace and social justice. (Fill in the blank)

3 A method to better understand the impact of Iona on pilgrims today is to ... (Tick 1 correct answer)

- interview pilgrims
- look at the historical sites
- read accounts of St Columba

4 On Iona, pilgrims are part of task teams which encourage ... (Tick 1 correct answer)

- rivalry
- prayer
- service
- making food

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# Mathematics Booster – Fractions RP

## Problem Solving 1

A box contains 560 counters.  
 $\frac{7}{10}$  of the counters are green.

How many counters are NOT green?



Sam

I have filled  $\frac{5}{6}$  of the album.

I have filled  $\frac{2}{3}$  of the album.



Joe

Who has the most cards?  
Convince me.

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# Mathematics Booster – Fractions RP

Use the cards to complete the statement below.  
Find 2 different solutions.

of  is

**192**   **3**   **240**   **5**   **144**   **4**

5. Three children are reading the same book which has 720 pages.

Jay has read  $\frac{3}{8}$  of the book.

Iqra has read  $\frac{4}{15}$  of the book.

Samantha read  $\frac{3}{9}$  of the book.

How many pages are left to read in total?

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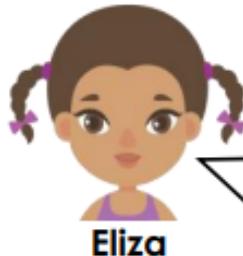
# Mathematics Booster – Fractions RP

4. Eliza and Luka are swimming lengths of a 48m long pool.

I swam  $\frac{7}{8}$  of the length of the pool, which is double Eliza's distance.



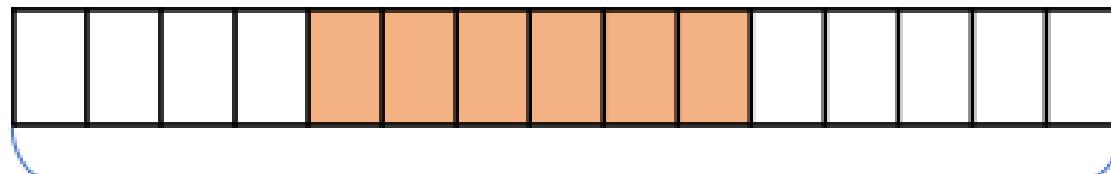
Luka



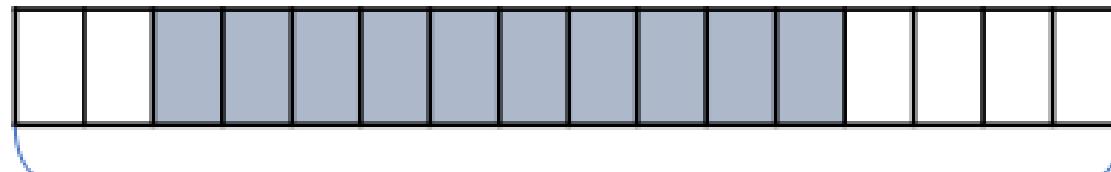
I swam  $\frac{5}{12}$  of the length of the pool.

Is Luka correct? Explain your answer.

9b. Find the value of the shaded part.



255



224



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# Mathematics Booster – Fractions RP

12a. True or false?

$$\frac{8}{20} \text{ of } 220 = \frac{6}{15} \text{ of } 120$$

8b. True or false?

$$\frac{5}{6} \text{ of } 144 = \frac{7}{8} \text{ of } 184$$

Karen makes a **fraction** using two number cards. She says, 'My **fraction** is equivalent to  $\frac{1}{2}$ . One of the number cards is 6'

What could Karen's **fraction** be?  
Give both possible answers.

$$\frac{\square}{\square} \text{ or } \frac{\square}{\square}$$

Class 6 did a survey of the number of trees in a country park. This pie chart shows their results.



Estimate the **fraction** of trees in the survey that are oak trees.

The children counted 60 ash trees.  
Use the pie chart to estimate the number of beech trees they counted.

Wednesday 21st January

KQ: Can I explain that we see things when light is reflected from an object into the eye?

## Match the definition to the correct vocabulary.

Shadow

The angle at which a light beam has left a state of matter.

Angle of reflection

When light changes direction when going through a different medium (state of matter).

Opaque

A group of light rays.

Light beam

A dark area or shape produced by an object coming between the rays of light and a surface.

Refraction

Cannot see through it.

Ray of incidence

The ray that strikes first upon a smooth surface.

**Challenge – draw and label a diagram that explains refraction.**

Wednesday 21st January

KQ: Can I explain that we see things when light is reflected from an object into the eye?

**Define the word 'reflection'.**

**Define the words 'light source'.**

Challenge – light will always travel in \_\_\_\_\_.

# Keywords

**light source**

A **light source** produces its own light.

**reflect**

To **reflect** light means that when light hits a surface it bounces off in another direction.

**surface**

A **surface** is the top or outside layer of an object or material.

**light ray**

A **light ray** is an arrow drawn on a diagram to show the direction in which light is travelling.

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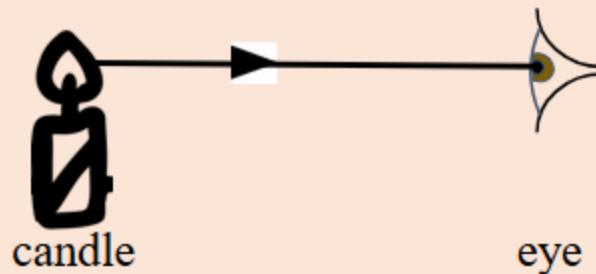
KQ: Can I explain that we see things when light is reflected from an object into the eye?

## Partner talk

Talk to a partner about how we see things.

We see things when light travels into our eyes.

To be able to see something, light must travel from that object into our eyes.



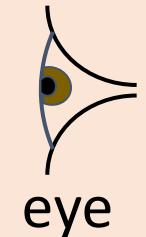
We see **light sources** because light travels from them into our eyes.

diagram to show how we see light sources

Challenge – why do we give light rays an arrow?

Anything that is not a light source cannot produce light to travel to our eyes.

This teddy bear is not a light source, so how can we see it?



teddy bear

If an object does not produce its own light, we can only see it if light from a light source **reflects** from the object's **surface** into our eyes.

The light travels from a **light source** to the object then into our eyes.

Seeing anything that is not a light source relies on reflection of light.

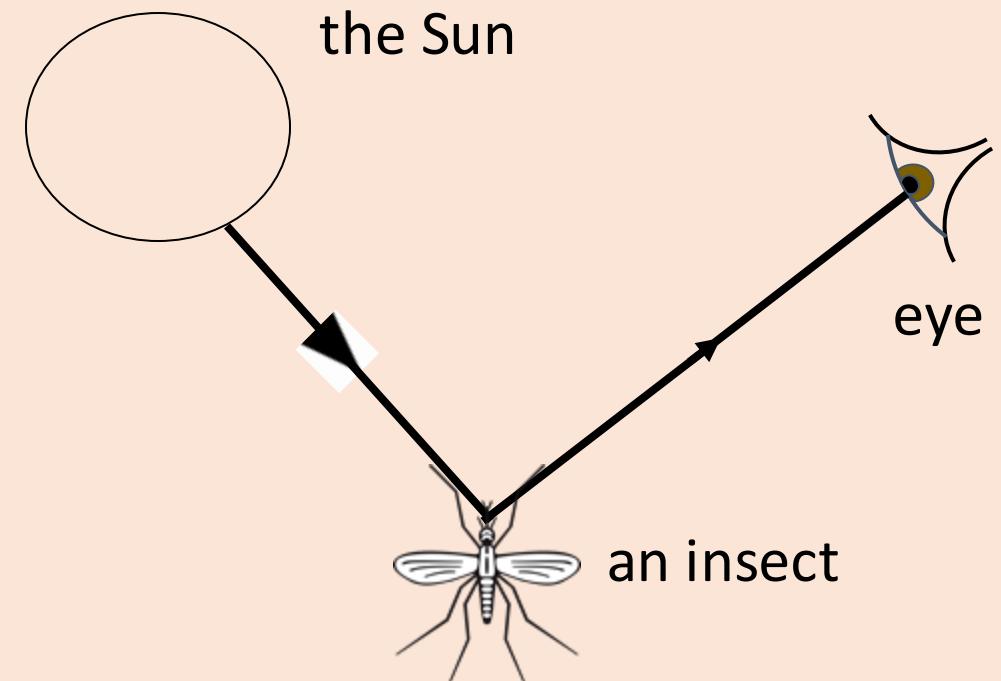
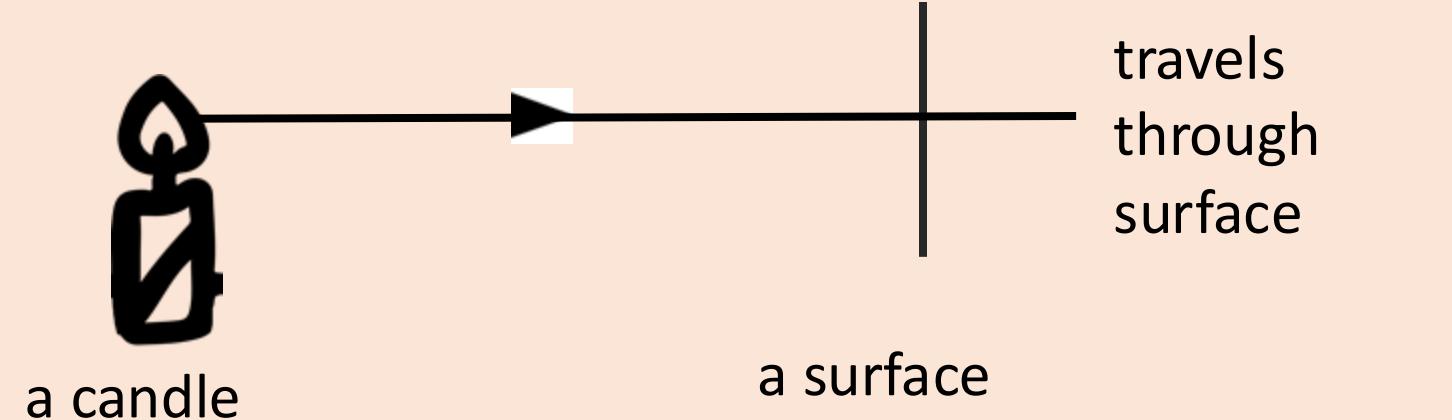


diagram to show how we see an object that is not a light source

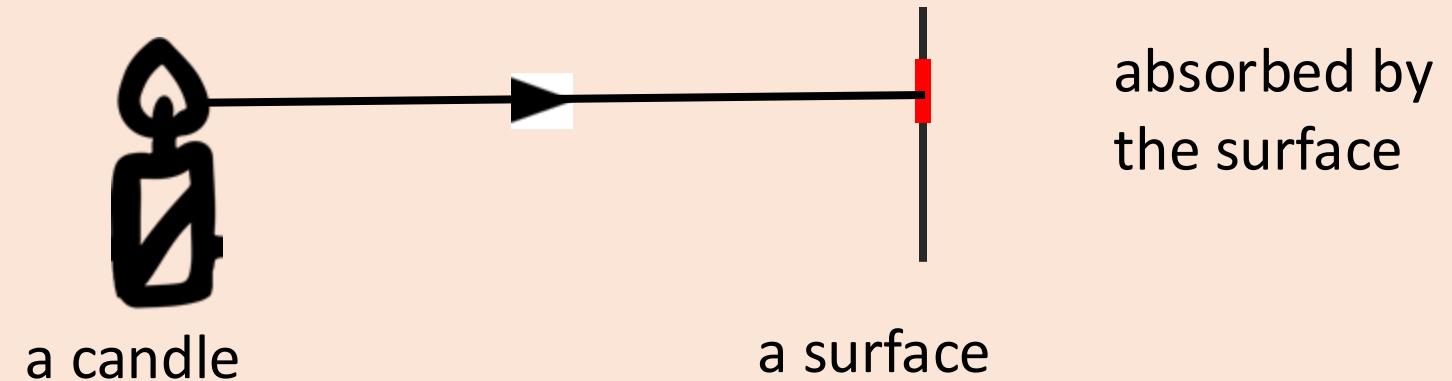
Light travels in a straight line from a **light source**.

If it hits a **surface**, different things could happen:

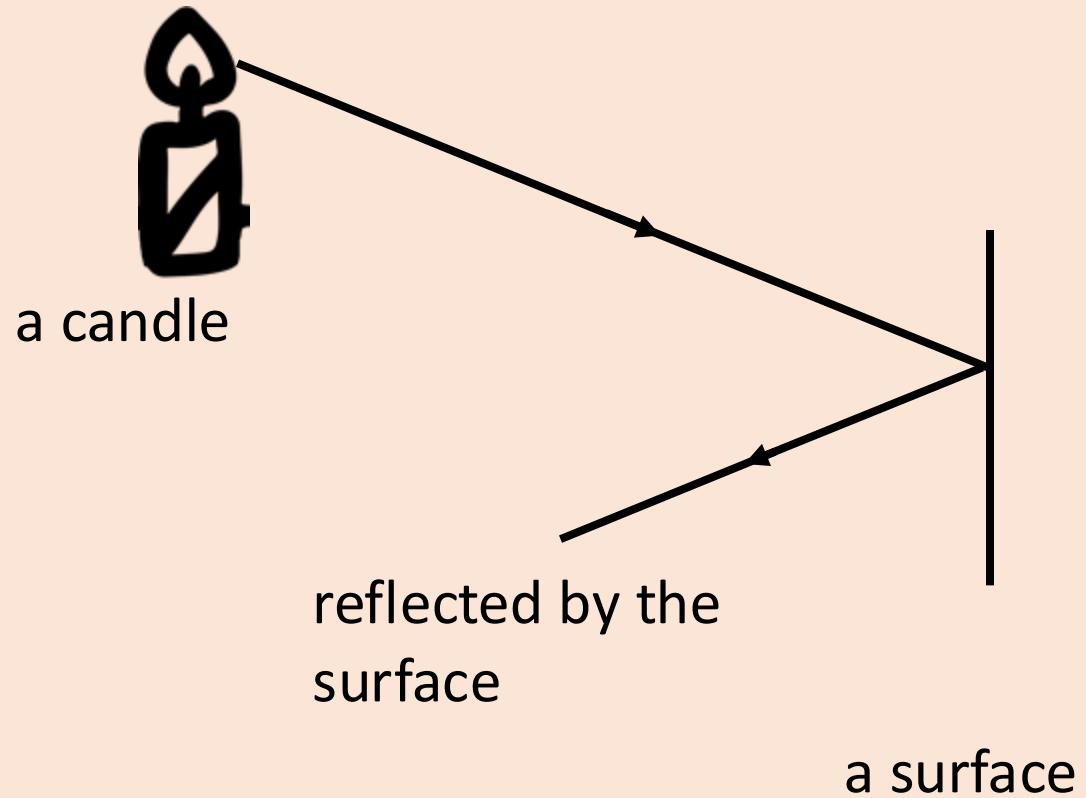
The light could travel through the surface.



Some of the light could be absorbed by the surface.



The light could be **reflected** by the **surface**.



Anything that can be seen must either produce or reflect light.

**Not all surfaces reflect the same amount of light.**

Most surfaces absorb some light and reflect some light.

The best surfaces for reflecting light are very smooth, such as glass mirrors or polished metal.



a car wing mirror

Use a ball of string or wool to model how a person sees an object.

The string should represent light travelling from the source to someone's eye.

You could take a photo of your model and annotate it to show what's happening.

I need to think about where the light starts and where it travels to.

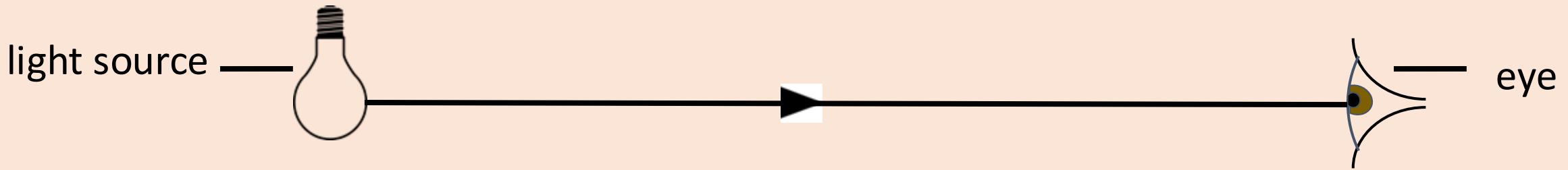


Aisha

When you look at an object, you can see it because light from its surface is **reflected** into your eyes.

Our eyes do not produce the light.

We can show this using scientific diagrams.



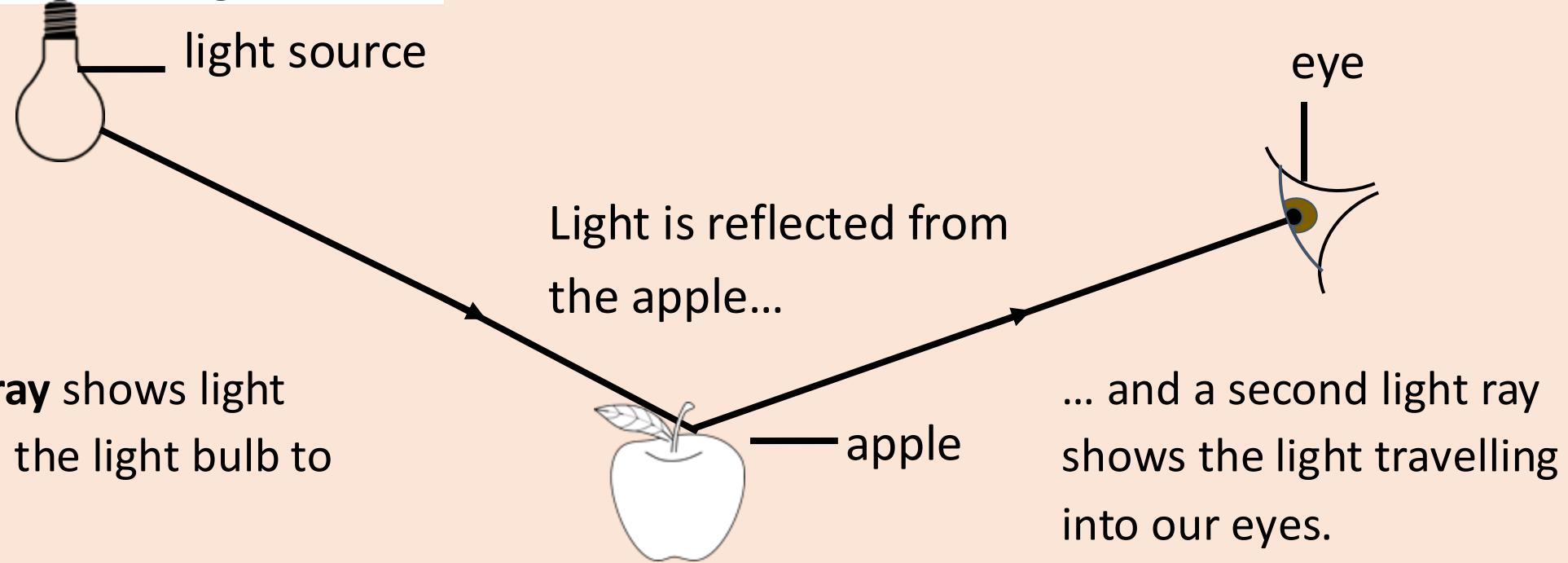
The arrow on the diagram is called a **light ray**.

We use light rays in diagrams to represent light travelling.

The diagram above shows light travelling directly from a **light source** into an eye.

When we see things that are not **light sources**, we can show the path of the **reflected** light in a diagram.

We must still include a light source.



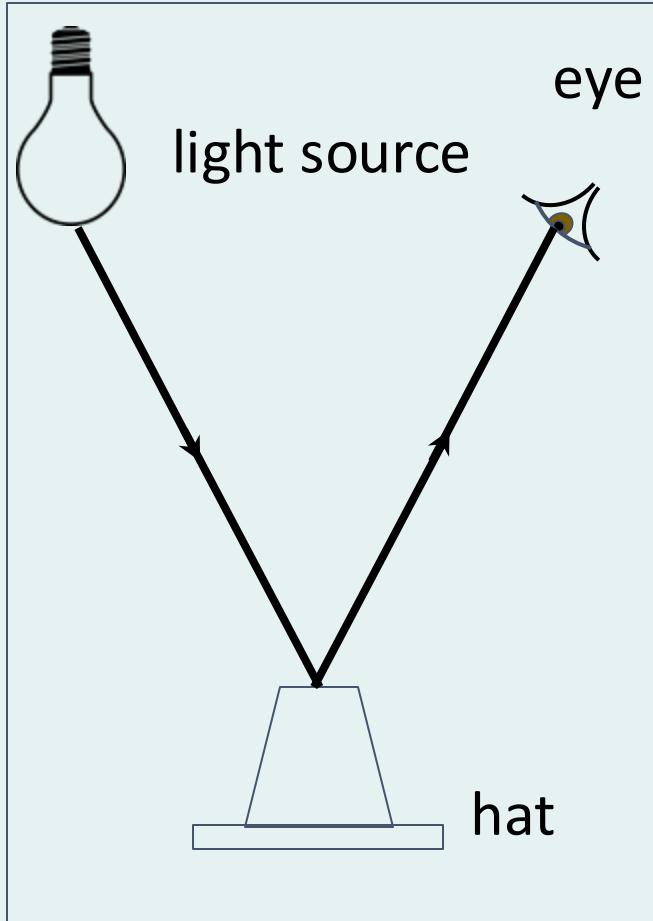
The first **light ray** shows light travelling from the light bulb to the apple.

We put the arrow head in the middle of the line to show the direction that the light is travelling in.

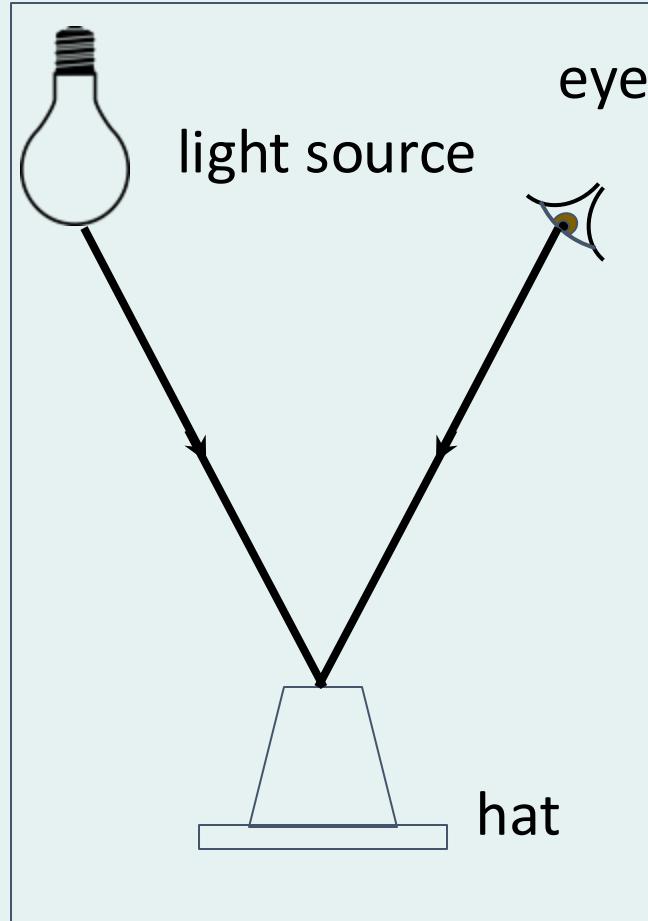
Diagrams can be used to show how we see objects

Which of these diagrams correctly shows how we see the hat?

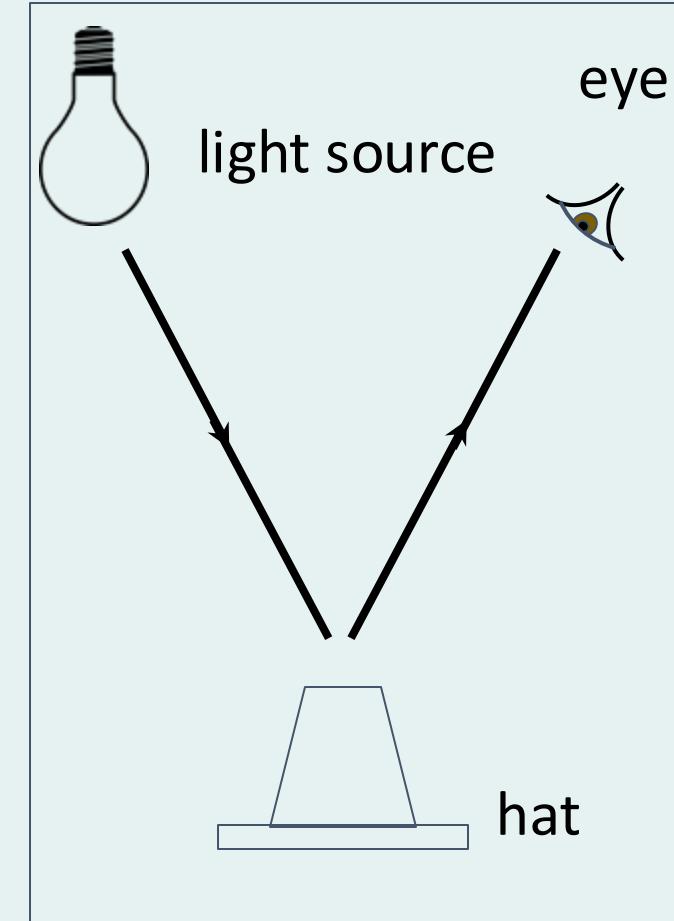
a 



b



c



Wednesday 17th January

KQ– Which materials make good reflectors?

Label whether your items reflect light or are a light source.

•B



•G



Challenge – name another light source and another good reflector of light.

# Reflective Materials in Real Life!

Reflective surfaces can be very useful.

- **Mirrors** inside cars reflect light to **help** drivers see objects **behind** them.
- **Reflective strips** on clothing and bikes help cyclists to be **extra visible** at night.
- 'Cat's eyes' on the road **reflect light** from car headlamps to help the driver see the road at night.



Can you think of any other uses for reflective materials?

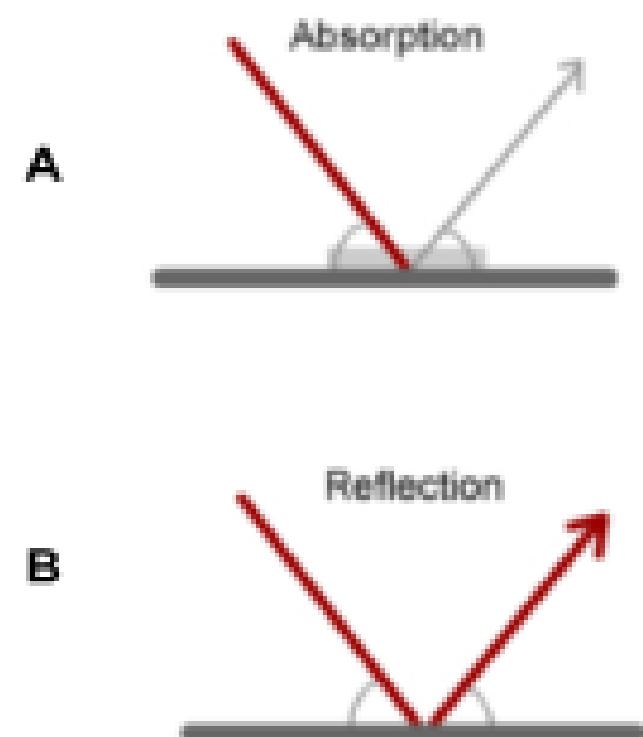
# Reflective and non-reflective materials

## Reflective

Reflects light well.  
Most of the light that hits the surface bounces off.

## Non-reflective

Do not reflect light well.  
Some light bounces off the object but most of the light is absorbed.



We see things when light travels into our eyes.

If something does not produce light, we can only see it if light reflects from its surface into our eyes.

The light travels from a source to the object then into your eyes.

Scientific diagrams and models can be used to show how we see reflected light.

# Wednesday 17th January

## KQ– Which materials make good reflectors?

Sort these items into the table below.

Foil 	Spoon 	Fork 
Paper 	Jumper 	Cardboard 
Newspaper 	Mirror 	Wood 

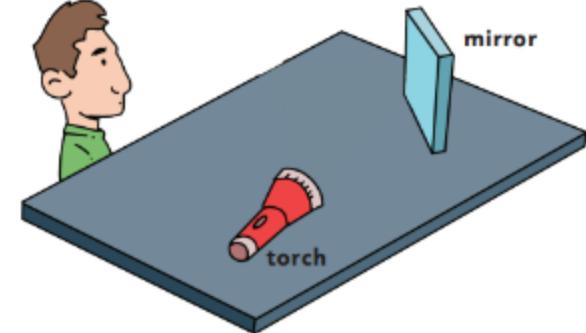
<u>Reflective material</u>	<u>Non-reflective material</u>

Draw two labelled diagrams showing reflection and absorption

## Challenge

The picture below shows Liam looking at the torchlight reflected in a mirror.

Draw **TWO arrows** to show the direction that the light must travel for Liam to see the light from the torch in the mirror.



## Mastery

Using Scientific vocabulary dull, dark, shiny, metallic and reflective, write a summary of today's lesson.