Wednesday 4th February
Morning Challenge

1. 8,437 + 2,965 =
2. 10,000 − 6,784 =
3. 672 × 8 =
4. 2/3 + 4/6 =
5. 4,536 ÷ 7 =
6. 4/5 x 3 =
7. 9.6 ÷ 0.4 =

Wednesday 4th February

TBAT: spell words with ‘ie’ or ‘ei’ after c.

You have one minute to decide on the correct spelling of these words and write them on a whiteboard.

Remember: ‘i’ before ‘e’ except after ‘c’.

rec__pt n__ce c__ling

dec__ve ach__ve sh__ld

Use the correct spelling word for each sentence.

1. The fox tried to _ _ _ _ _ _ _ the farmer by hiding behind the bushes.

2. I was excited to _ _ _ _ _ _ _ a letter from my cousin.

3. The ball hit the _ _ _ _ _ _ _ of the sports hall.

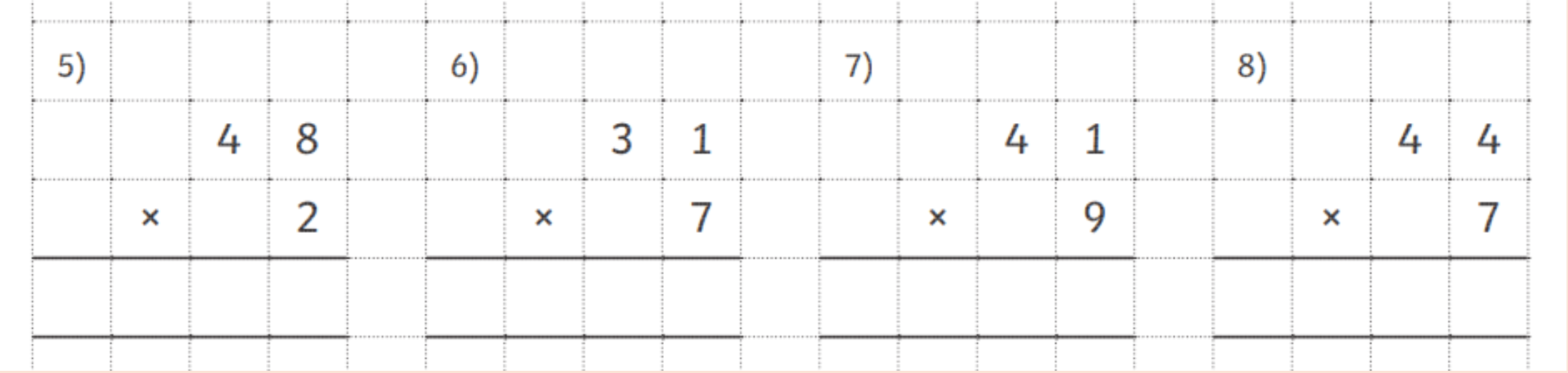
4. The goalkeeper managed to _ _ _ _ _ the ball before it crossed the line.

deceive
conceive
receive
perceive
ceiling
receipt
protein
caffeine
seize

Challenge – Create a glossary.

- Write the definition
- Use it in a **complex sentence**
- Add a **synonym** and **an antonym** if possible

04.02.26



04.02.26

TBAT: use long division.

3 in 3

Daily 10 - Mental Maths Challenge - Topmarks

1. 1,386 ÷ 9 =

2. 203.42 – 56.11 =

3. Here is part of the bus timetable from Riverdale to Mott Haven.

Riverdale	10:02	10:12	10:31	10:48
Kingsbridge	10:11	10:21	10:38	10:55
Fordham	10:28	10:38	10:54	11:11
Tremont	10:36	10:44	11:00	11:17
Mott Haven	10:53	11:01	11:17	11:34

How long does it take for the 10:48 bus from Riverdale to reach Mott Haven?

Challenge – 20 is the answer. What is the question? (It must include a fraction, decimal or percentage)

04.02.26

TBAT: use long division.

$741 \div 13$

$13 \times 1 = 13$ $13 \times 10 = 130$

$13 \times 2 = 26$ $13 \times 20 = 260$

$13 \times 3 = 39$ $13 \times 30 = 390$

$13 \times 4 = 52$ $13 \times 40 = 520$

$13 \times 5 = 65$ $13 \times 50 = 650$

$13 \times 6 = 78$ $13 \times 60 = 780$

$13 \times 7 = 91$ $13 \times 70 = 910$

04.02.26

TBAT: use long division.

$$512 \div 16 =$$

16	32	48	64	80	96	112	128	144	160

04.02.26

TBAT: use long division.

Use these multiples of 13 to complete the long divisions.

13	26	39	52	65	78	91	104	117

13	2	7	3

13	4	4	2

		2	3
3	9	1	
	3	4	
		5	1
		5	1
			0

What is the missing number in Teddy's division? ☐

04.02.26

TBAT: use long division.

1. 312 ÷ 24 =
2. ___ = 900 ÷ 75
3. 522 ÷ 18 =
4. What is 2175 shared by 87?
5. 8125 ÷ 13 =

RP – Sam wants to buy some cards. After his purchase, he has 203 cards from the 29 packs he purchased. How many cards were in each pack?

Challenge

True or False?

304 ÷ 19 > 15

2175 ÷ 87 < 25

Mastery Challenge

A glass can hold 24ml of juice. Emily is trying to work out how many glasses can be filled from the 312ml of juice left in the carton.

She uses this calculation to solve the problem:

		1	3	0
2	4	3	1	2

Explain why Emily's calculation is incorrect.

Mastery with Greater Depth -

Two children are solving this long division calculation:

900 ÷ 75

Li says that she used her knowledge of multiplying by ten to help her solve this problem.

Charlie says that he wrote the first five multiples of 75 and used these to solve the calculation.

Which method will work for solving the problem? Explain your reasoning and give the correct answer.

Wednesday 4th February

TBAT: use precise vocabulary to plan a character description.

3 in 3

1. Rewrite the reported speech below in **direct speech**.
Remember to punctuate your sentence correctly.

The eyewitness explained that he was shocked to see so many cows on the motorway.

3. Insert the missing **full stops** and **capital letters** into the passage below.

ayla has always been interested in how things work she asked lots of questions as a child about the workings of machines aeroplanes are her passion and she would like to be an engineer when she is older

2. Which verb is an **antonym** of the verb succeed?

Tick **one**

win	1
fail	2
try	3
struggle	4

***CHALLENGE*: Create a noun and an adjective derived from the verb *succeed*.**

Wednesday 4th February
TBAT: use precise vocabulary to plan a character description.

“Lyra is a tornado of energy and curiosity.”

“She behaves as though the college is her personal playground.”

“Her daemon often tries to caution her.”

Partner discussion -

What kind of person is Lyra?

What are her **key traits**?

Which words or phrases stand out?

Wednesday 4th February

TBAT: use precise vocabulary to plan a character description.

What Tier 2 vocabulary can you think of to describe Lyra?

Wednesday 4th February

TBAT: use precise vocabulary to plan a character description.

1 noun

2 verbs

3 adverbs

4 adjectives

Challenge – Use your vocabulary pyramid to write a sentence describing Lyra.

Wednesday 4th February

TBAT: use precise vocabulary to plan a character description.

Introduction – who she is overall	
Appearance – what she looks like (linked to personality)	
Personality – traits and habits	
Actions & relationships – what she does / Pan	

Challenge – Use two different adverbials and ambitious vocabulary to describe Lyra's personality.

04.02.26

Before Lunch Booster

256.8 + 96.87 =

986.5 – 8.897 =

3570 x 9 =

2597 x 25 =

256 ÷ 8 =

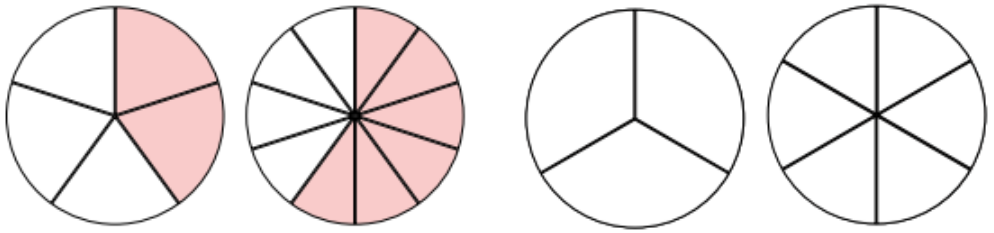
4864 ÷ 19 =

3/9 of 1107 =

3/5 x 250 =

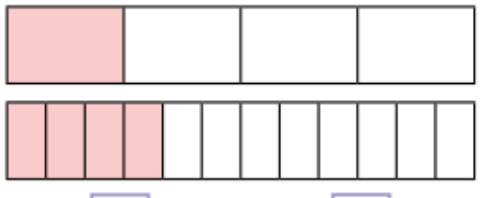
04.02.26

Maths Intervention – Compare fractions



$\frac{2}{5}$ ☐ $\frac{6}{10}$

$\frac{2}{3}$ ☐ $\frac{3}{6}$



☐ ☐ ☐

Use the symbols <, = or > to complete the following:

$\frac{3}{5}$ ☐ $\frac{12}{15}$ $\quad$ $\frac{2}{8}$ ☐ $\frac{4}{16}$

$\frac{2}{3}$ ☐ $\frac{4}{9}$ $\quad$ $\frac{2}{7}$ ☐ $\frac{14}{21}$

Maisie and Ed are comparing $\frac{4}{5}$ and $\frac{4}{7}$.

Ed says, 'I need to find a common denominator to compare these.'

Maisie says, 'I know just by looking at the numerators.'

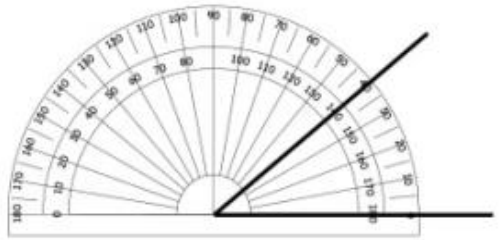
Whose method would you use and why?

Wednesday 4th February

KQ – Can I investigate how changing the angle of a mirror changes the angle of reflection?

Quick Quiz

1 What is the name of the equipment shown in the image?



_____

2 Mirrors are highly reflective and are sometimes used to deliberately _____ the direction that light travels. (Fill in the blank)

3 What do you measure using a protractor? (Tick **1** correct answer)

- ☐ length
- ☐ mass
- ☐ light
- ☐ angles

4 What units are used to describe the size of angles? (Tick **1** correct answer)

- ☐ kilograms
- ☐ degrees
- ☐ newtons
- ☐ litres
- ☐ degrees celsius

Wednesday 4th February

KQ – Can I investigate how changing the angle of a mirror changes the angle of reflection?

Discuss

Have you ever seen light bounce off a shiny surface? What happens?

Can light change direction?

Challenge - what is meant by the scientific word refraction?

Keywords

reflected	If light is **reflected**, it is bounced off a surface.
angle	An **angle** is the space between two straight lines which join at a vertex or point.
protractor	A **protractor** is a piece of equipment used to measure and draw angles.
results	The **results** of a test or enquiry is what happened or what was found out.
evidence	**Evidence** is information which helps us to prove that something is true or not true.

Izzy has been learning about **reflected** light.
She knows that if you change the **angle** that light hits a surface, the angle of reflection will also change.

To find out more about this, Izzy planned an investigation to answer the enquiry question:

How does the **angle** of light hitting a surface affect the angle of **reflected** light?

Izzy

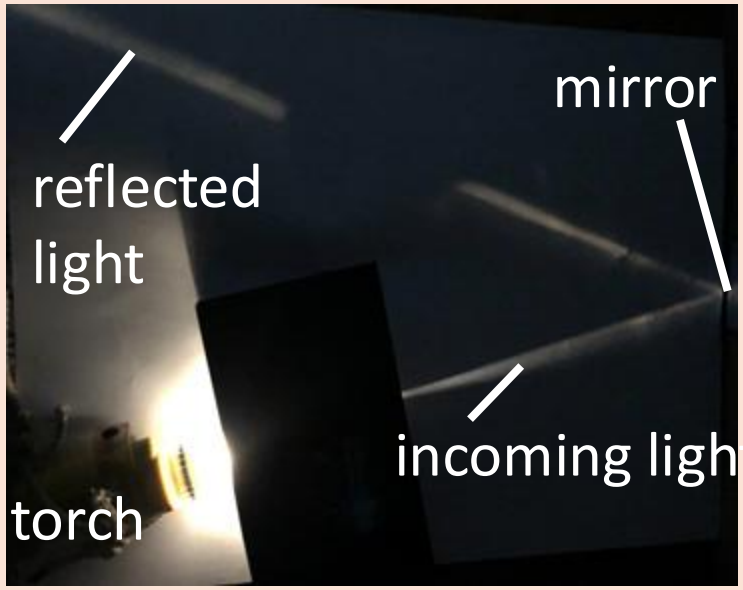
How does the **angle** of light hitting a surface affect the angle of **reflected** light?

Izzy

In Izzy's plan, she decided to shine a torch towards a mirror.

Why do you think Izzy chose a mirror rather than the wall?

Mirrors are highly reflective.
They are sometimes used to deliberately change the direction that light travels.



shining a torch against a mirror

Izzy's teacher gave her a piece of paper with a mirror line, and the normal line drawn at a right angle to this.

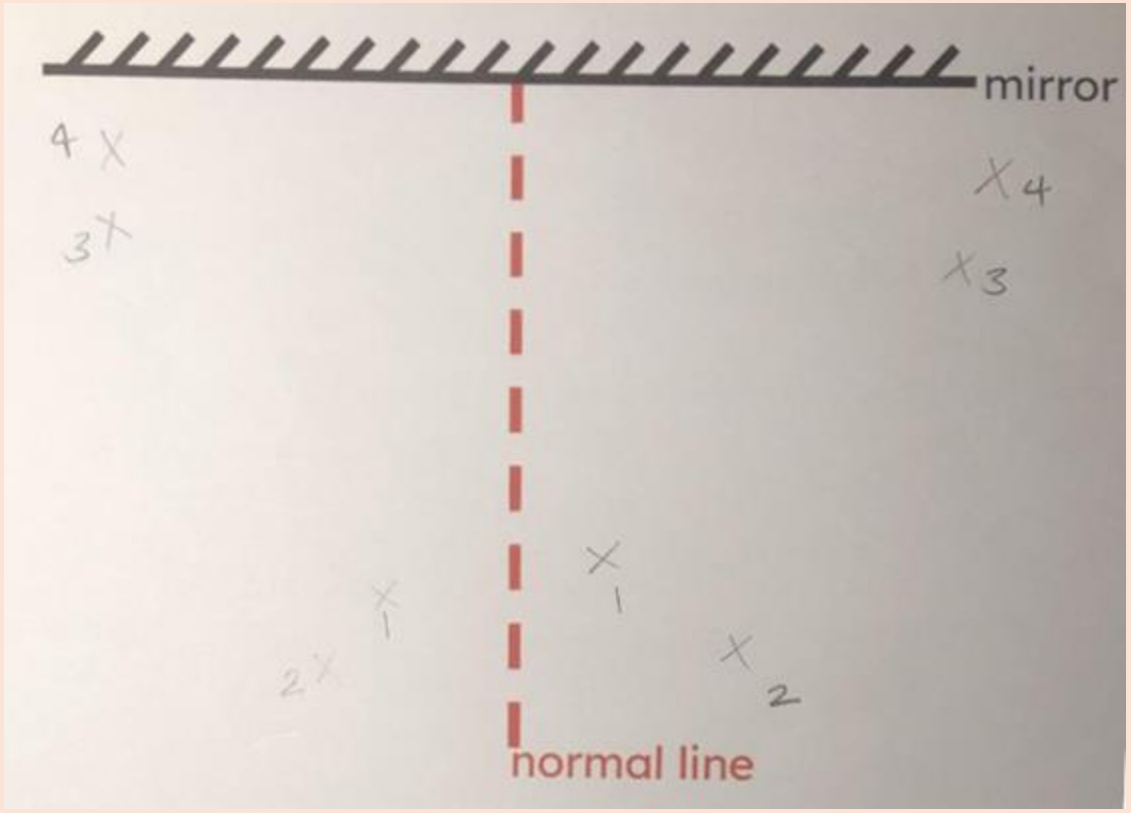
Izzy placed her mirror on the mirror line and shone a torch towards the mirror in a dark room.

She marked the position of the incoming and **reflected** light on the paper and numbered this.

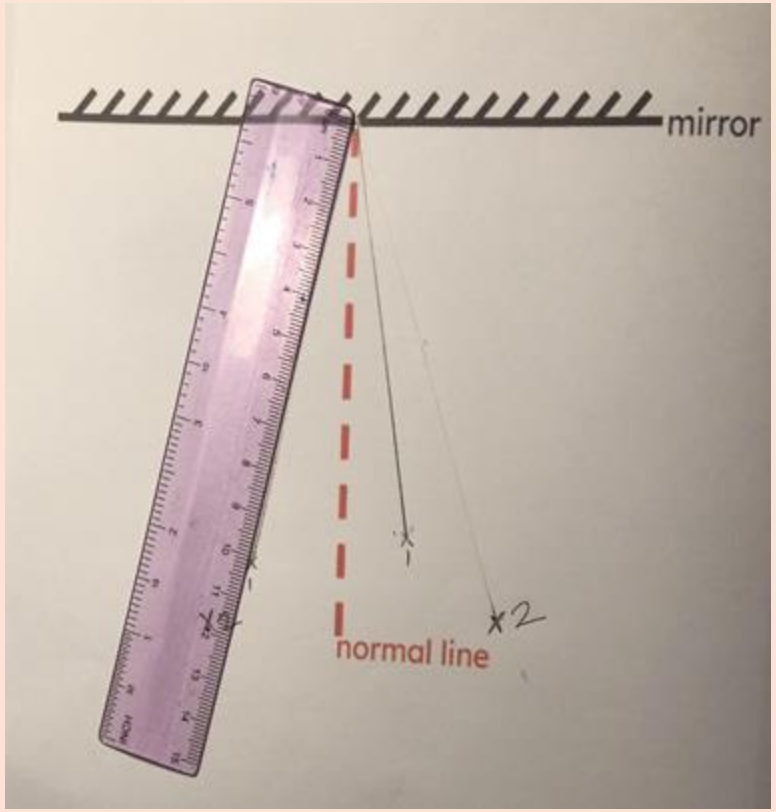
Izzy repeated the test, shining the torch from different **angles.**

Investigating reflected light

Explanation



Izzy turned the room light on and moved the torch and mirror away from the paper.

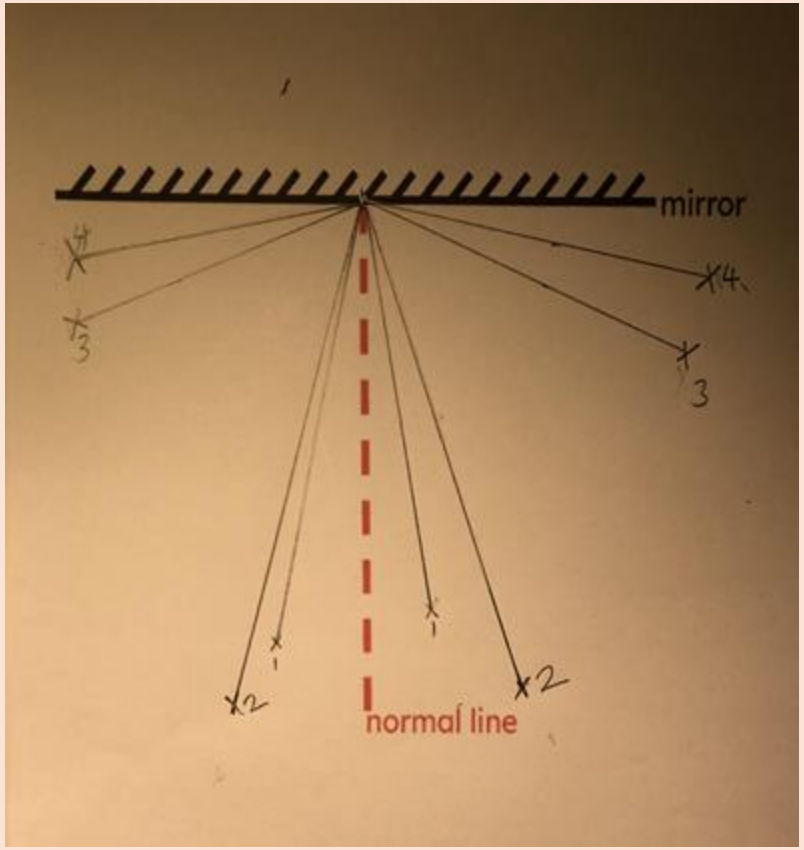


Then she began to join up the marks for each number to show the different **angles** of light.

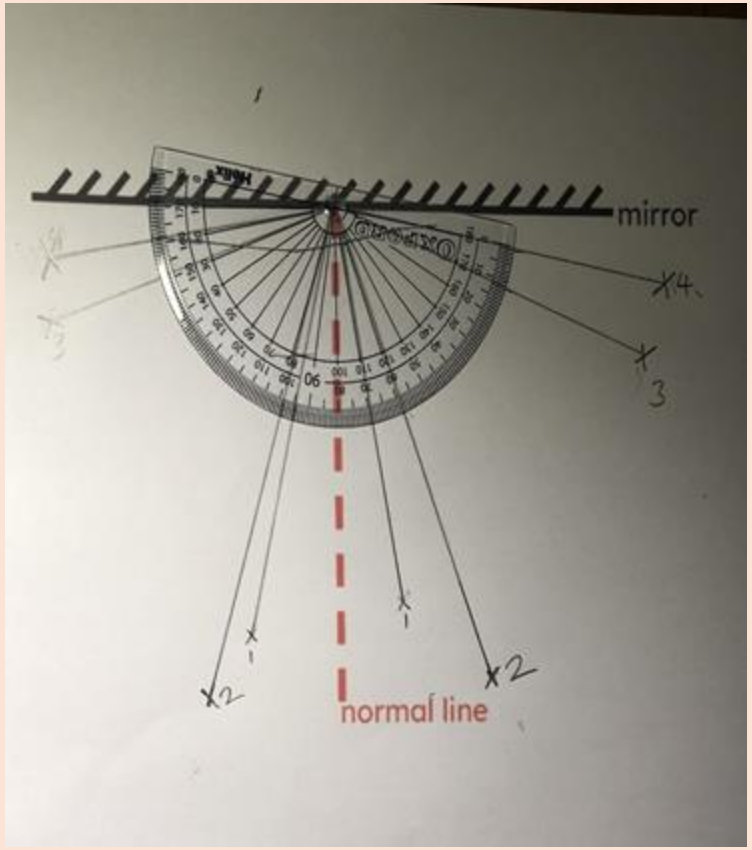
Izzy

Investigating reflected light

Explanation



Izzy connected all the same numbered incoming and **reflected** beams of light.



Then she used a **protractor** to measure the **angles** between the lines she had drawn and the normal line.

Izzy

Izzy is looking at the **results** of her investigation with Jacob.

Jacob

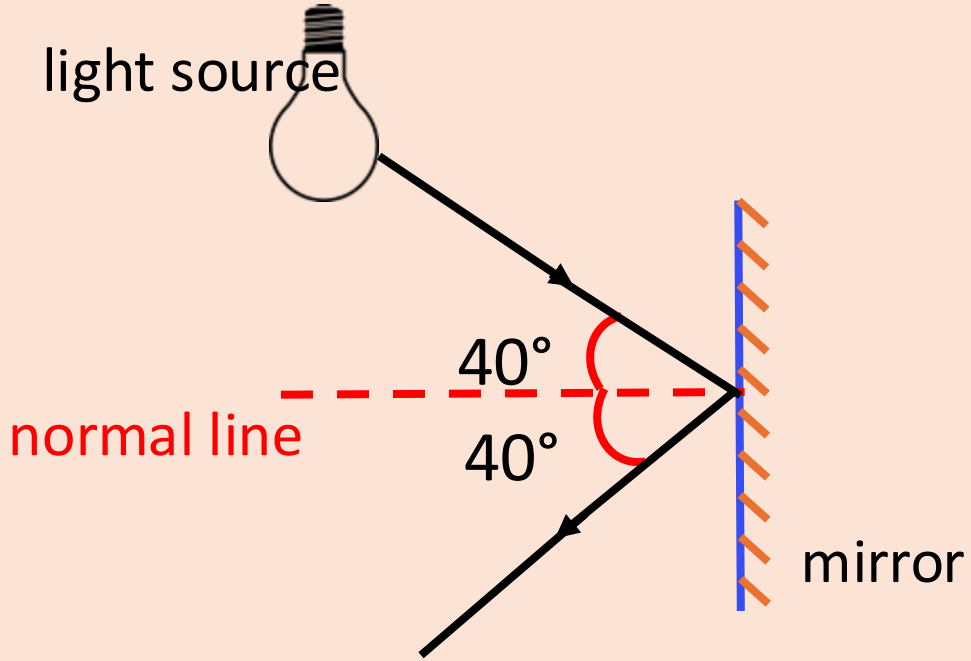
angle between incoming light and the normal line (°)	angle between reflected light and the normal line (°)
15	17
20	20
70	70
80	81

Izzy

They are trying to work out if there is a pattern in her data.

Can you identify one?

This diagram shows light being **reflected** off a surface.

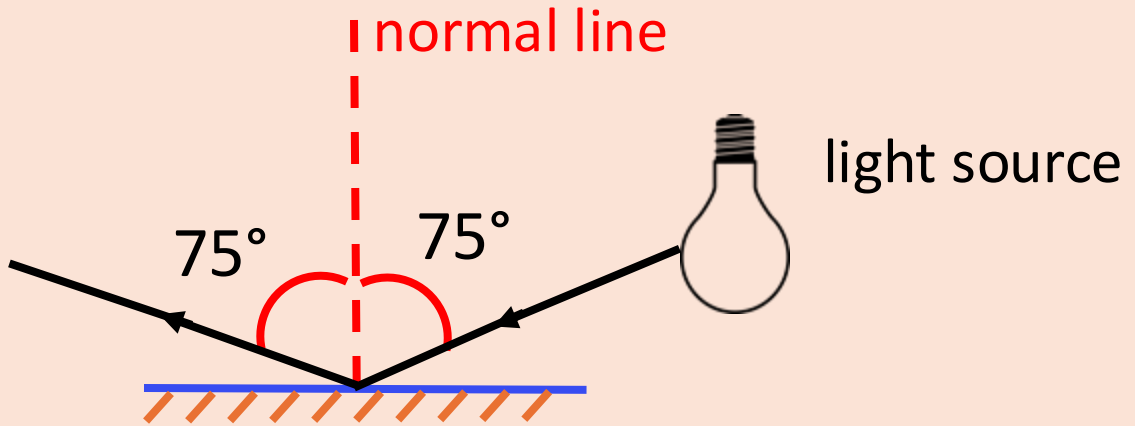


If the angle between the incoming light and the normal line is 40°, the angle between the reflected light and the normal line will also be 40°.

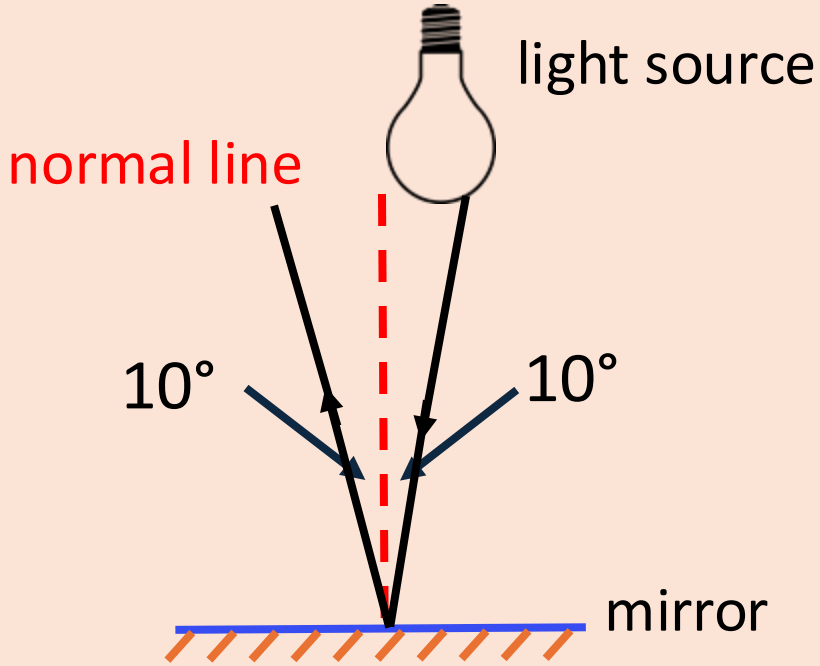
The angle of reflected light

Explanation

Light which hit surfaces with a wide **angle** to the normal line will be **reflected** at a wide angle.



Light which hit surfaces with a narrow angle to the normal line will be reflected at a narrow angle.



Jacob reassures Izzy.

Jacob

Measuring **angles** is difficult.

Also, sometimes light beams are slightly unclear, making it hard to know where to put the cross.

Sometimes measurements may not be perfect, but you should not worry if you are very close.

Izzy

It is OK to have some small errors or differences in a task like this.

Izzy's **results** are close enough to act as **evidence** to support the fact that **reflected** light bounces off a surface at the same **angle** as it hits it.

Summary

Using mirrors to reflect light: do and review

If you change the angle that light hits a surface, the angle of reflection will also change.

Mirrors are highly reflective. They are sometimes used to deliberately change the direction light travels.

Reflected light bounces off the surface at the same angle as it hits it.

When you measure angles, it is acceptable for results to vary slightly because it is difficult to measure perfectly.

Wednesday 4th February

KQ – Can I investigate how changing the angle of a mirror changes the angle of reflection?

Task 1:

Carry out an investigation and collect data to answer the enquiry question:

Are your results similar to Izzy's?

How does the **angle** of light hitting a surface affect the angle of **reflected** light?

Izzy

angle between incoming light and the normal line (°)	*angle between reflected light and the normal line (°)*
15	*17*
20	*20*
70	*70*
80	*81*

Challenge

Can you predict what will happen to the angle of reflection if the mirror is tilted even more? Explain your thinking.

Task 2

Look at this data. What do you notice about the results?

angle between incoming light and the normal line (°)	angle between reflected light and the normal line (°)
25	25
40	41
55	55
75	84

Mastery

Using evidence from your investigation, explain the relationship between the angle at which light hits a mirror and the angle at which it is reflected. Use the words: mirror, reflect, angle of incidence and angle of reflection in your answer.

Wednesday 4th February

KQ – Can I investigate how changing the angle of a mirror changes the angle of reflection?

Exit Quiz

1 Mirrors, metal spoons and kitchen foil are made from highly _____ materials. (Tick **1** correct answer)

- ☐ reflective
- ☐ reactive
- ☐ responsive
- ☐ repulsive

2 Because they are highly reflective, mirrors are used to... (Tick **1** correct answer)

- ☐ produce light
- ☐ make light travel in curved lines
- ☐ change the direction that light travels

3 Reflected light bounces off surfaces at the same _____ as it hits them. (Fill in the blank)

4 If light hits a mirror at an angle of 30° against the normal line, what will the angle of the reflected light be? (Tick **1** correct answer)

- ☐ 20°
- ☐ 150°
- ☐ 30°
- ☐ 0°