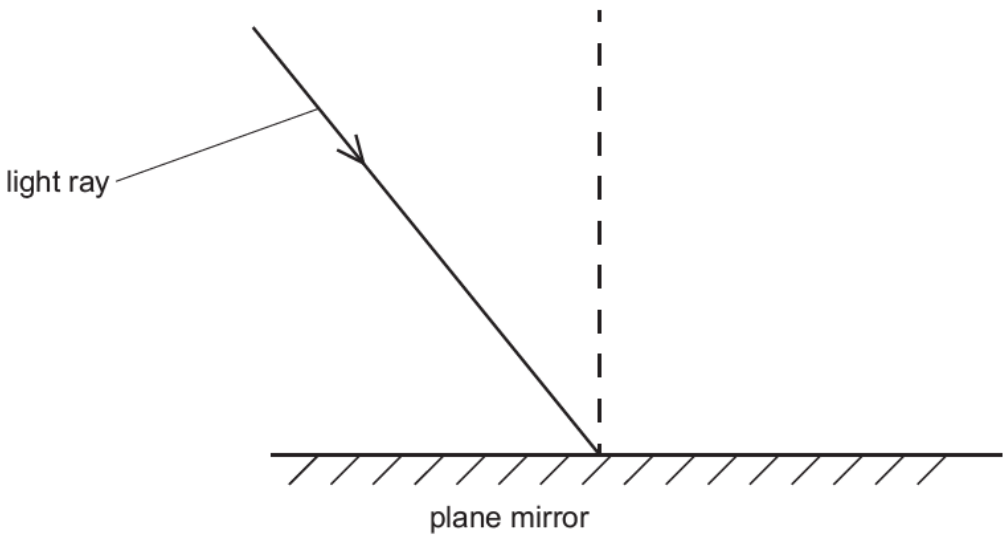
Light and colour – Checkpoint Sec 1 Physics

1. No.8

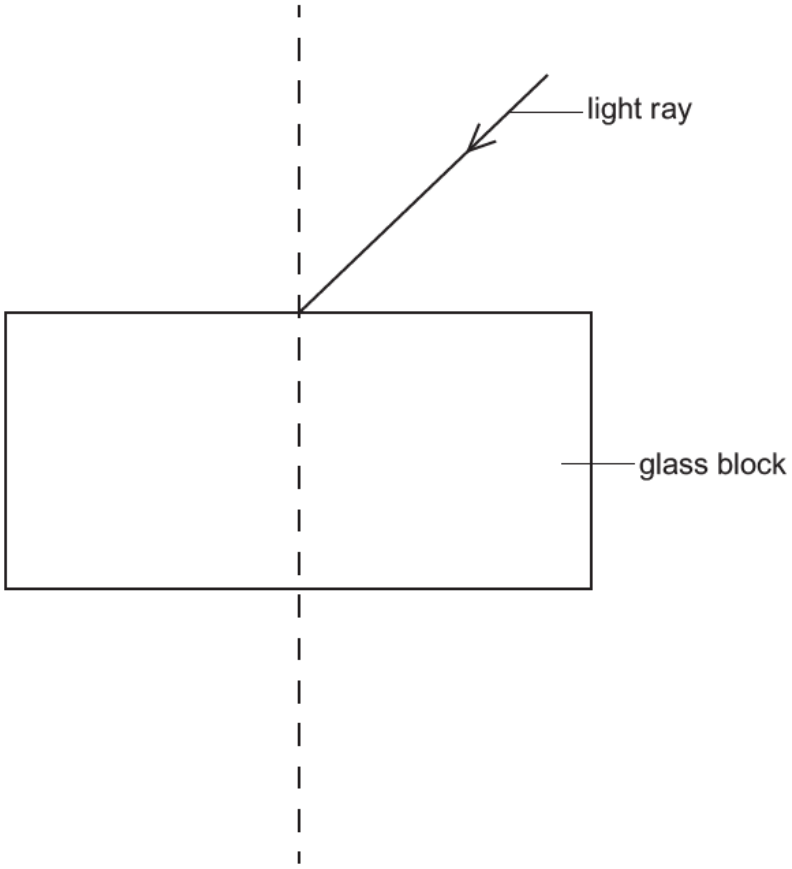
Oliver investigates light rays.

(a) (i) Complete the diagram to show what happens when a light ray hits a plane mirror.



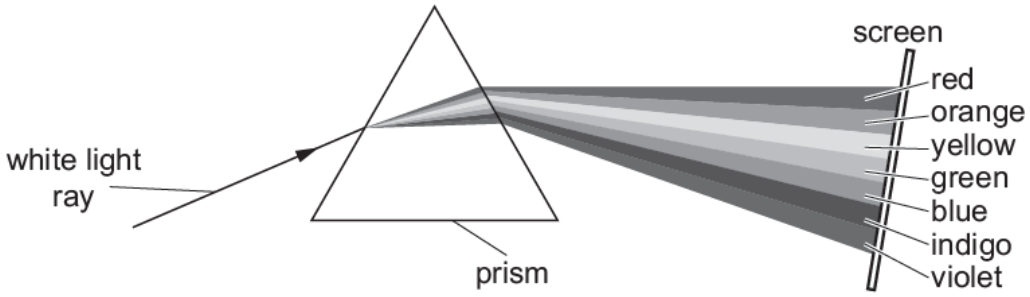
[1]

(ii) Complete the diagram to show what happens when a light ray passes through a glass block.



[2]

(b) When white light passes through a prism, it is split into the colours of the rainbow.



Write down the name of this process.

..... [1]

2. No.12

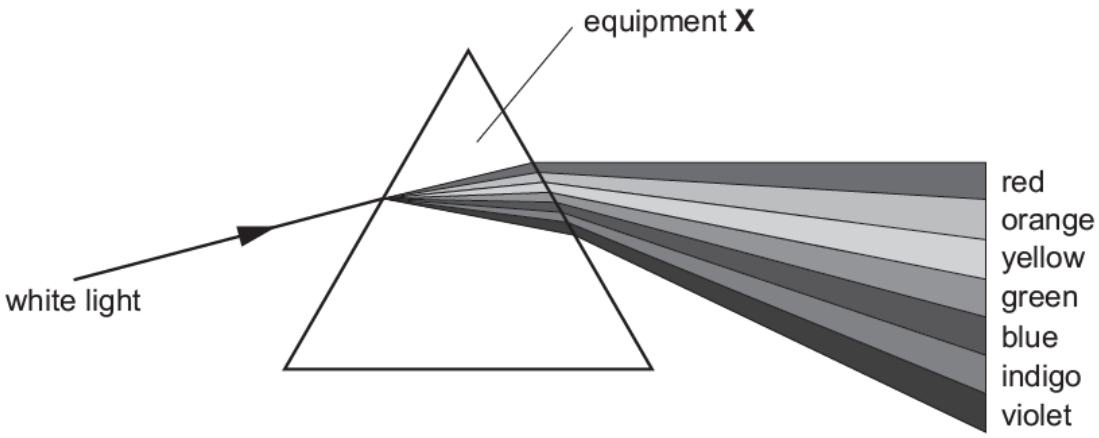
Complete the table to show the colour each object appears in different colours of light.

colour of light	colour of object	colour the object appears
white	red	.....
green	green	.....
blue	red	.....

[2]

3. No.13

Blessy uses pure white light to produce a spectrum of colours.



(a) What is the name of the process that splits white light into a spectrum of colours?

..... [1]

(b) Write down the name of equipment **X**.

..... [1]

4. No.3

Some objects in the Universe are seen because they **emit** light.

Other objects are seen because they **reflect** light.

(a) Tick (✓) the boxes next to the objects that **emit** light.

Jupiter	
Mars	
the Sun	
North Star	
the Earth's Moon	

[2]

(b) Which scientist first suggested that the planets in our Solar System orbit the Sun?

Circle the correct answer.

Copernicus **Darwin** **Galileo** **Rutherford** [1]

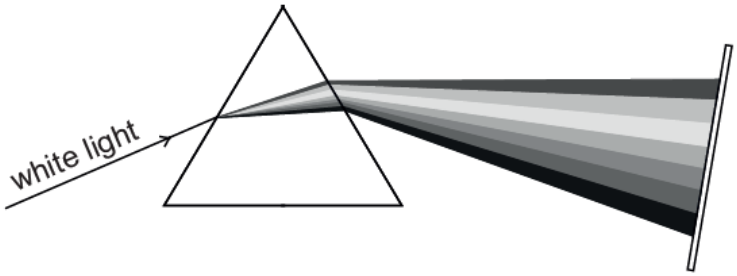
(c) Which of these planets is closest to the Sun?

Circle the correct answer.

Earth **Jupiter** **Neptune** **Venus** [1]

5. No.4

Look at the diagram. It shows white light being split into different colours.



Complete the sentences.

Choose from the list.

dispersion **eight** **filter** **mirror**

prism **reflection** **refraction** **screen**

seven **six** **spectrum**

When white light enters a ..... it is split into .....

different colours.

This process is known as ..... .

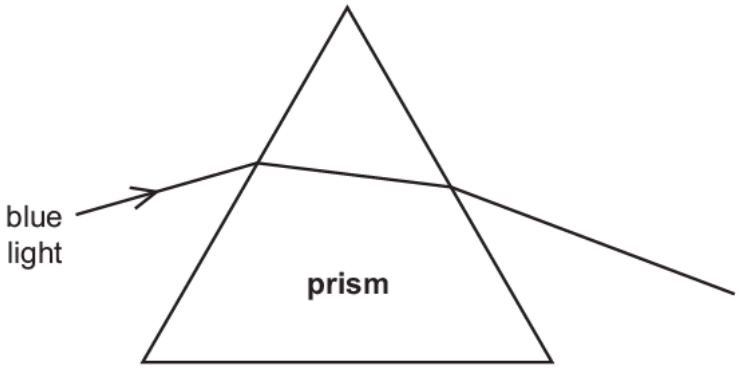
The different colours are known as the colours of the ..... .

[4]

6. No.6

Carlos investigates light.

(a) He shines blue light into a prism.



(i) Describe **one** thing that happens to the blue light.

.....

..... [1]

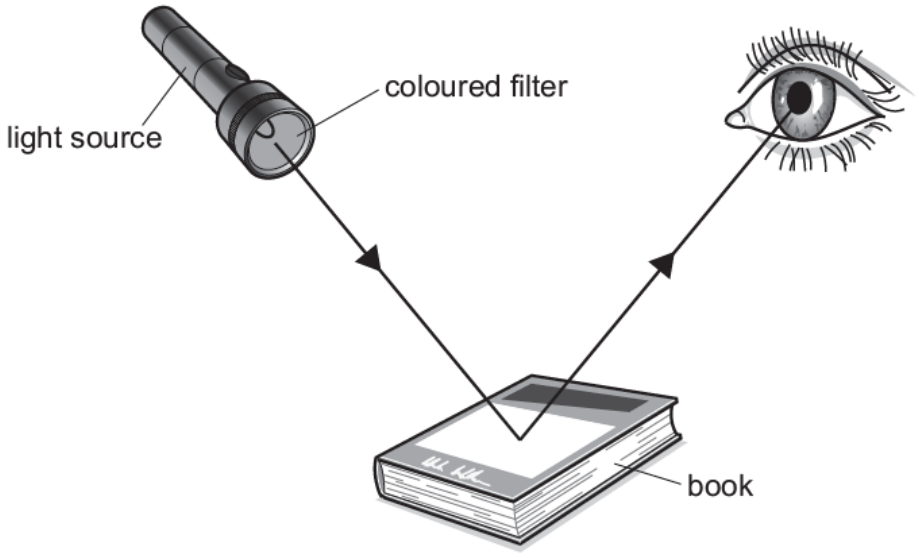
(ii) Carlos changes the blue light to **white** light.

Describe **one other** thing that happens to the white light.

.....

..... [1]

(b) Carlos shines light through different coloured filters onto different colours of a book.



Complete his results table.

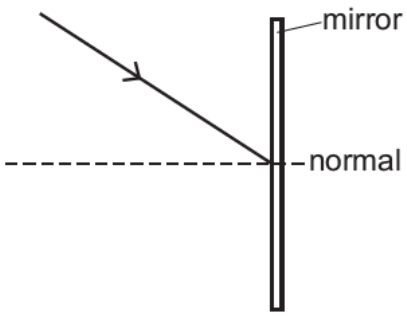
colour of light	colour of book	colour of light reflected into eye
red	red	.....
blue	red	.....
red	magenta	.....

[2]

7. No.12

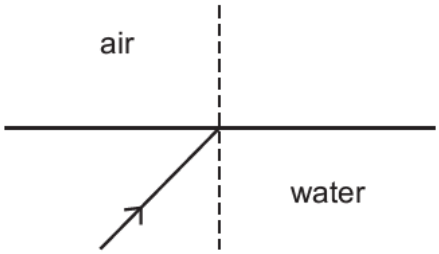
Complete the light rays in the **three** diagrams.

(a) **reflection**



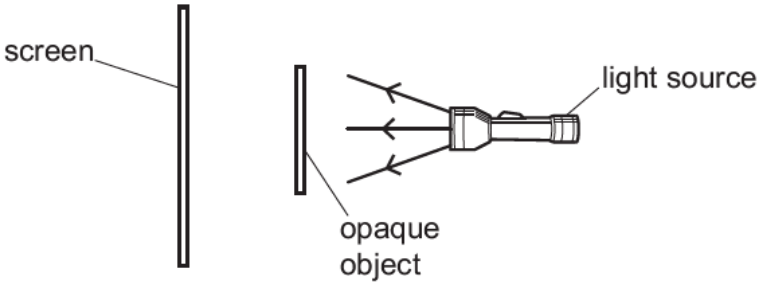
[1]

(b) **refraction**



[1]

(c) **shadow formation**



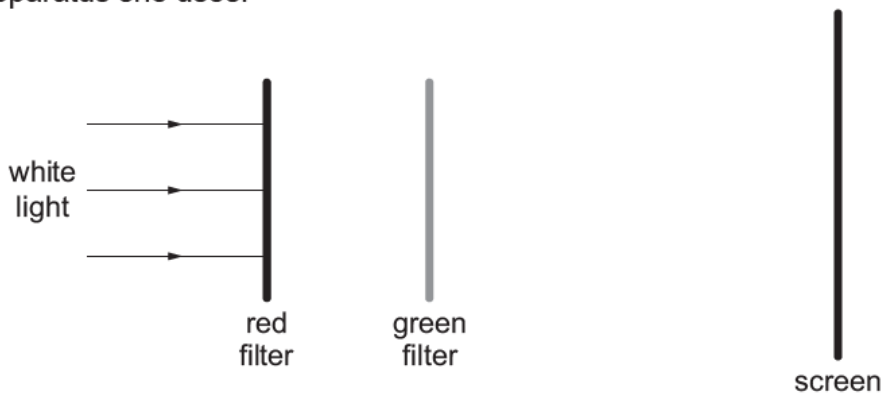
[2]

8. No.4

Jamila does an experiment with light.

She does the experiment in a dark room.

Here is the apparatus she uses.



What does she see on the screen?

.....

Explain your answer.

.....

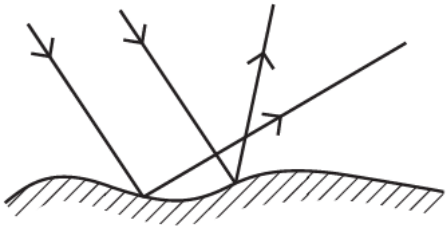
.....

.....

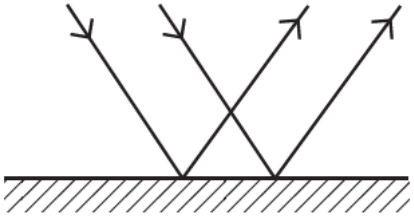
[3]

9. No.8

Light is reflected from different surfaces.



rough surface



smooth surface

(a) What is the law of reflection?

Complete the sentence.

The angle of reflection equals the angle of ..... . [1]

(b) The reflections on **rough** and **smooth** surfaces are different.

Write down one difference.

.....

.....

.....

..... [1]

10. No.3

Label the diagram showing the reflection of light by a mirror.

Choose words from

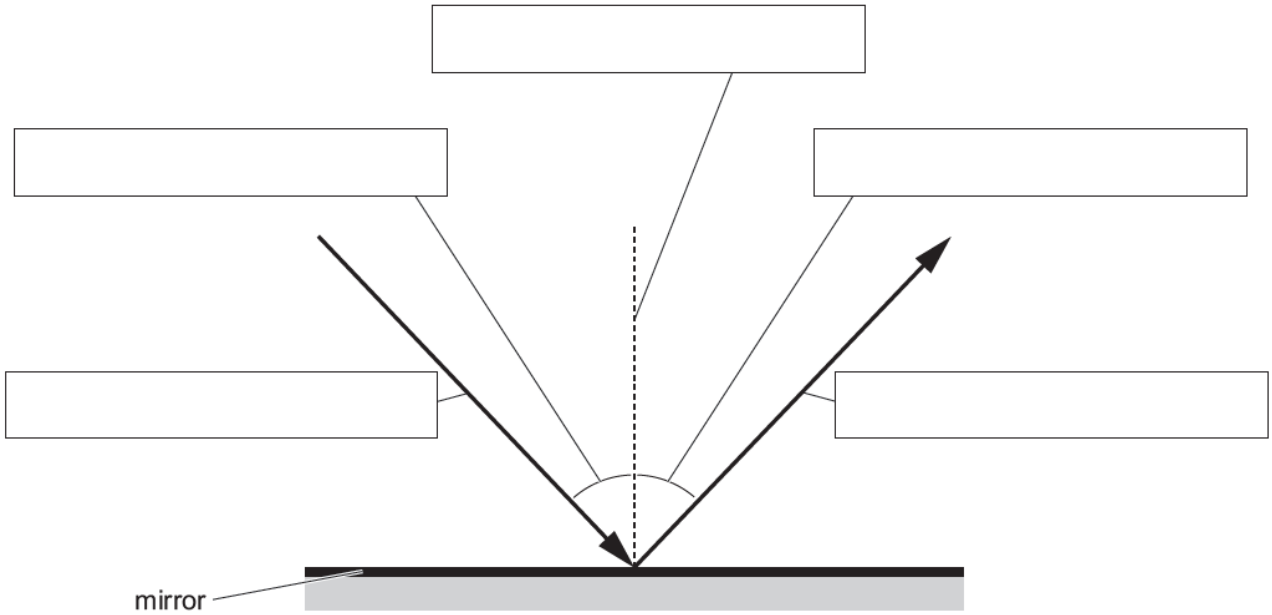
angle of incidence

angle of reflection

normal

incident ray

reflected ray



[3]

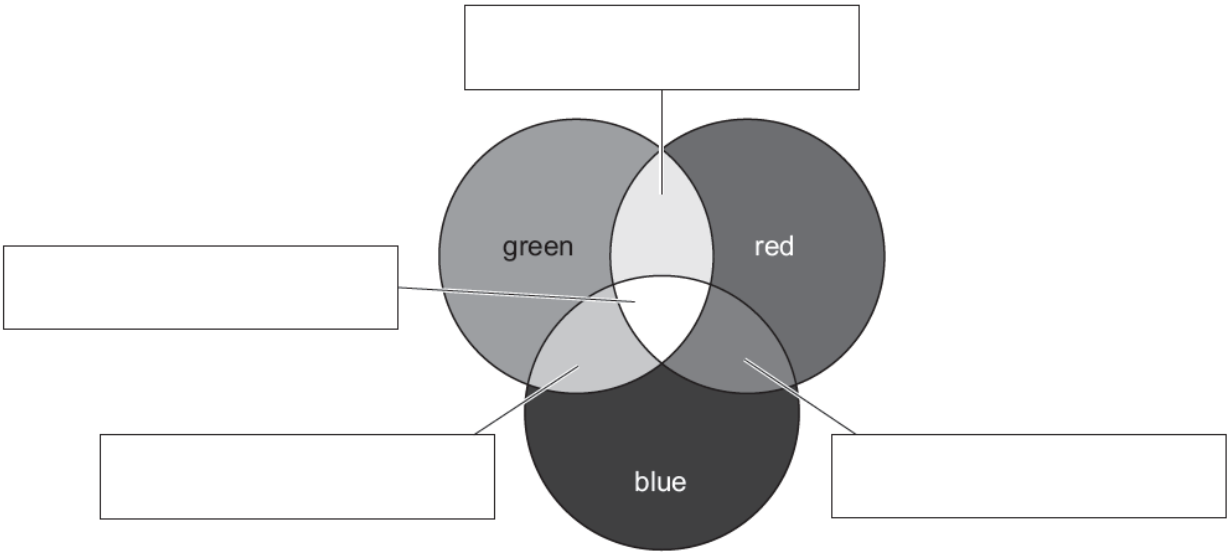
11. No.6

Class 9 learn about coloured light.

Their teacher tells them about colour addition.

She gives them a diagram showing equal amounts of the primary colours of light overlapping.

Label the diagram with the correct colours.

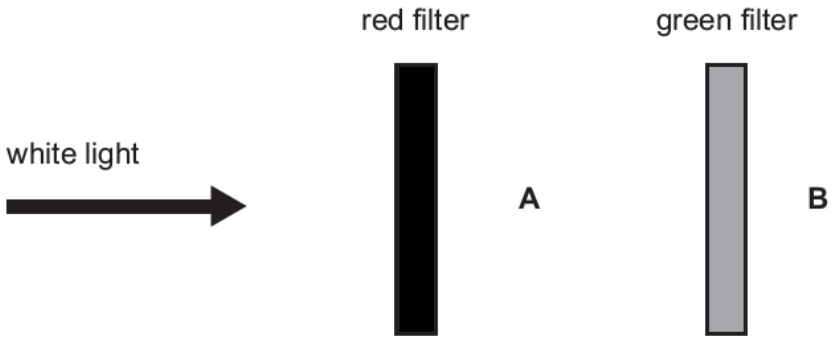


[2]

12. No.6

Yuri investigates light and coloured filters.

(a) He shines white light through a red filter and then a green filter.



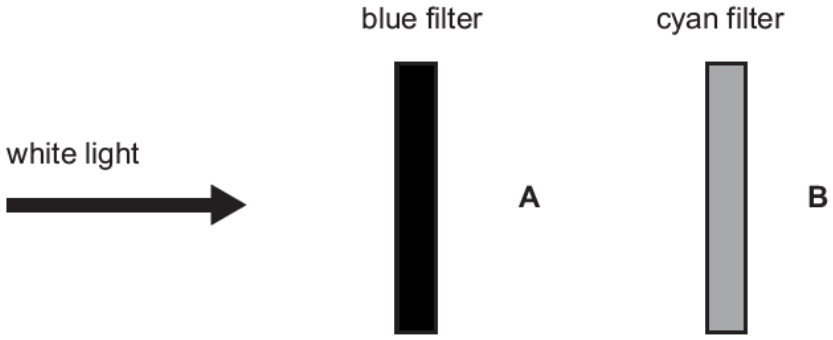
What is the colour of the light at **A** and at **B**?

A .....

B .....

[2]

(b) He shines white light through a blue filter and then a cyan filter.



What is the colour of the light at **A** and at **B**?

A .....

B .....

[2]

13. No.6

There are many objects in space.

(a) Which object is a source of light?

Circle the correct answer.

asteroid

Earth

Moon

planet

star

[1]

(b) Comets are **not** sources of light.

Explain how we can see a comet even though it is not a source of light.

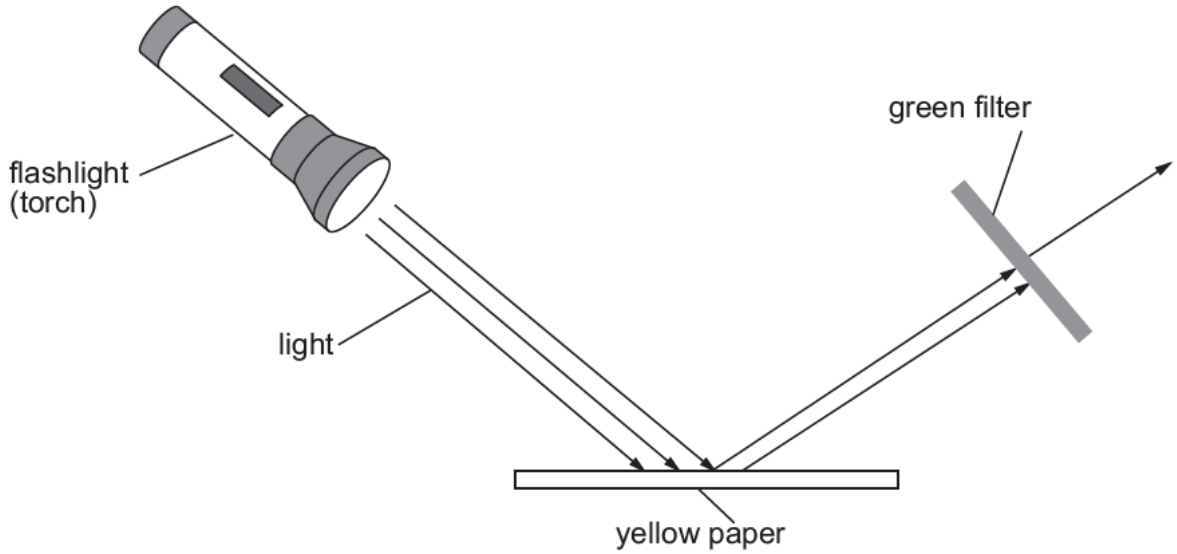
.....

.....

..... [2]

14. No.3

Yuri uses a flashlight.



Complete the sentences.

Choose from the following words.

You can use each word once, more than once, or not at all.

black **blue** **green** **red** **white**

The light from the flashlight contains three primary colours.

When these three primary colours are added together it makes ..... light.

This light contains red light, green light and ..... light.

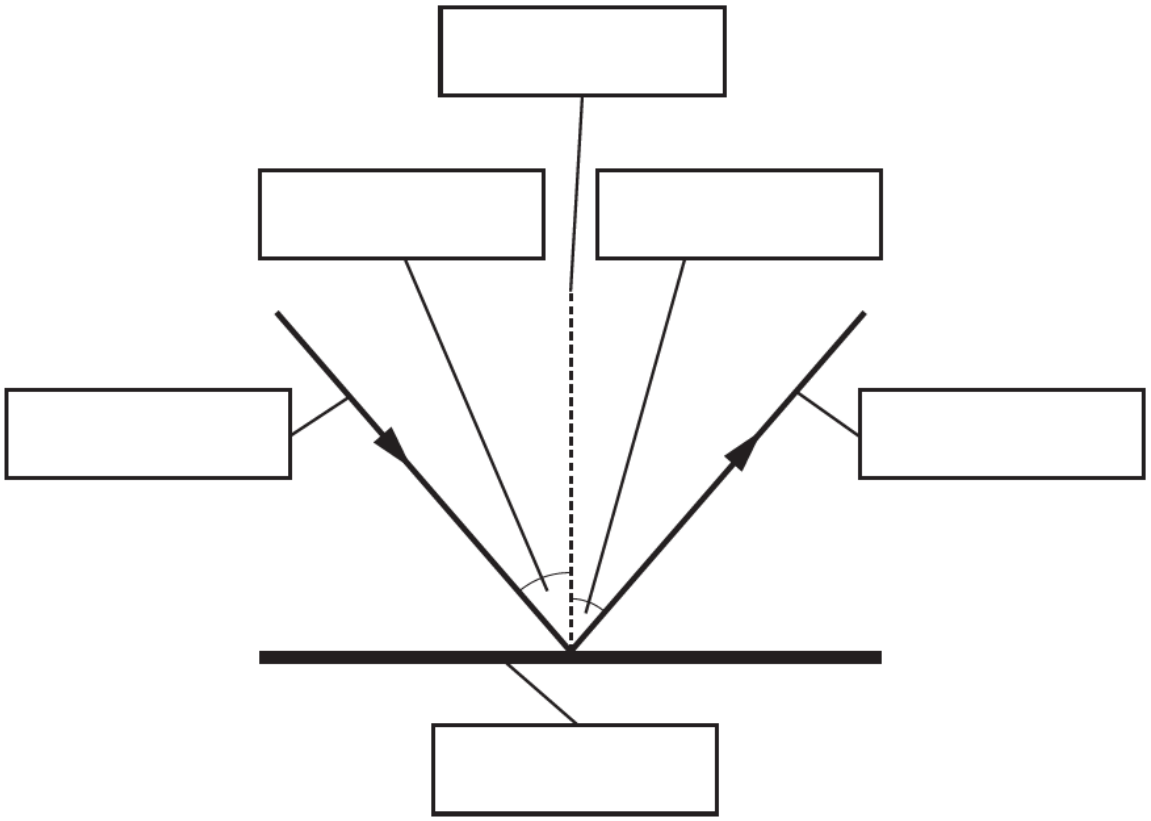
The yellow paper reflects the red light and ..... light.

The green filter only transmits ..... light. [4]

15. No.8

Carlos learns about the law of reflection in a lesson.

He draws a diagram.



Label his diagram.

Use the following words.

angle of incidence

angle of reflection

incident ray

mirror

normal

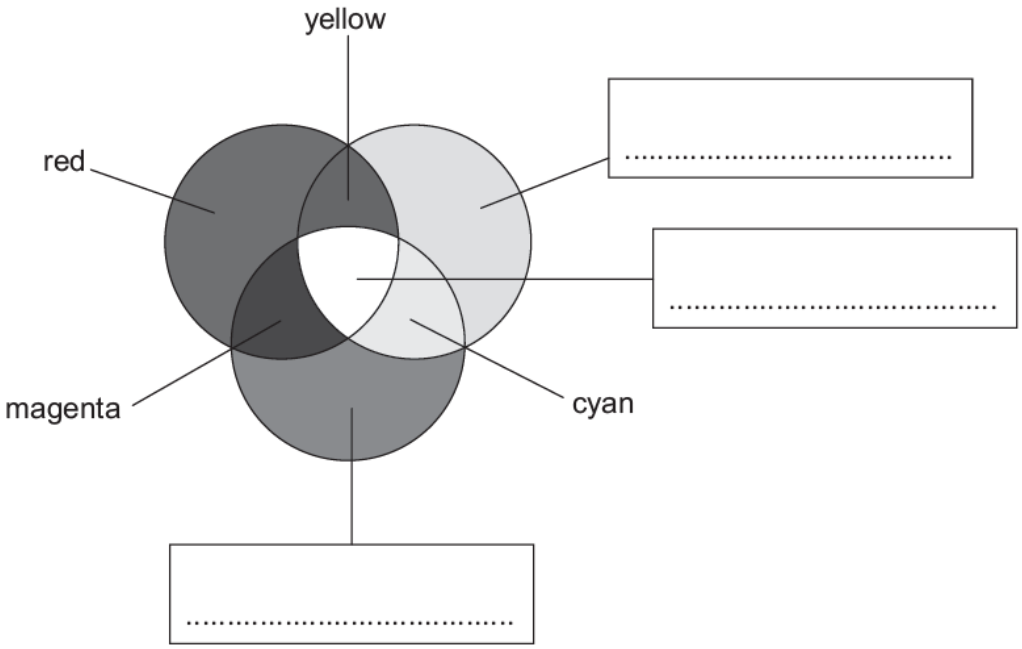
reflected ray

[3]

16. No.8

Jamila uses the internet.

She finds some information about adding coloured light together.



Write the correct colours of light in the three boxes on the diagram. [2]