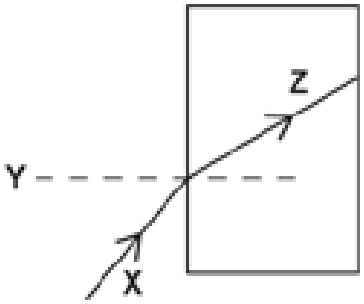
1. A student draws a ray diagram to show the refraction of a light ray through a glass block.



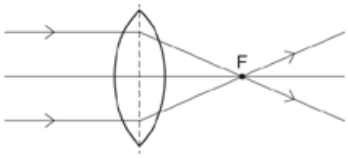
X is the incident ray. What are the names of line **Y** and line **Z**?

Y _____

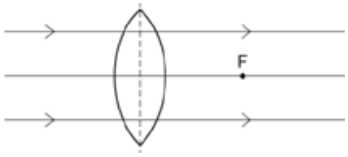
Z _____ **[1]**

2. Which ray diagram correctly shows rays of light passing through a lens with principal focus F?

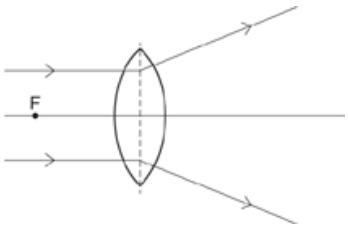
A



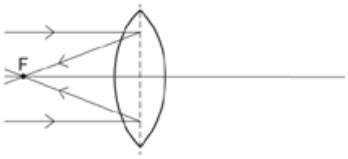
B



C



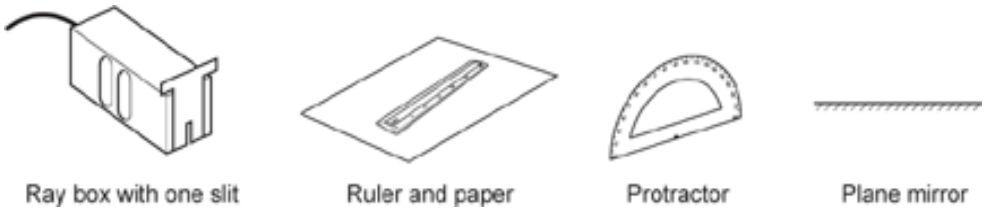
D



Your answer ☐ **[1]**

3. A student does an experiment to investigate the reflection of light from a plane mirror.

The diagram shows the equipment the student uses



Describe how the student does the experiment.

In your answer include:

- how the student sets up the equipment
- what the student will measure
- a prediction of what the student will find out from their results.

You can draw a labelled diagram to support your answer.

[6]

4. A shirt appears green in white light.

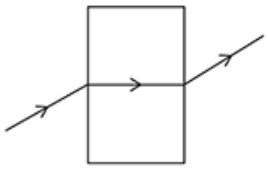
Which colour will the shirt appear in **red** light?

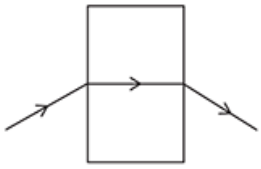
A Black
B Blue
C Green
D Red

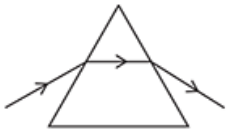
Your answer ☐ **[1]**

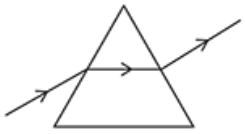
5. A student shines a ray of red light at different shaped glass blocks.

Which diagram shows a correct path for the ray?

A


B


C


D


Your answer ☐ **[1]**

6. Fig. 16.1 shows a submarine under water.

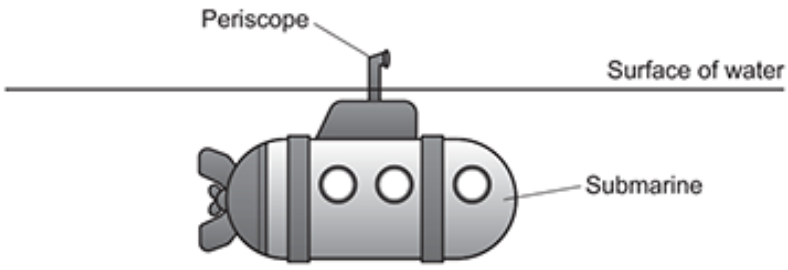


Fig. 16.1

A periscope is used to look above the water. **Fig. 16.2** shows the periscope.

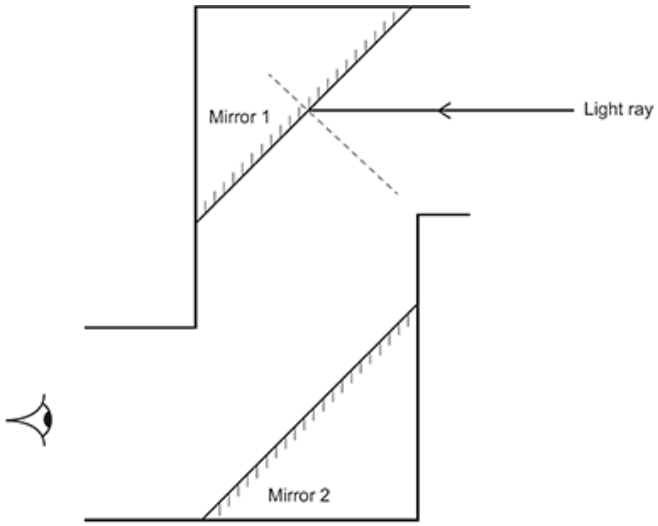
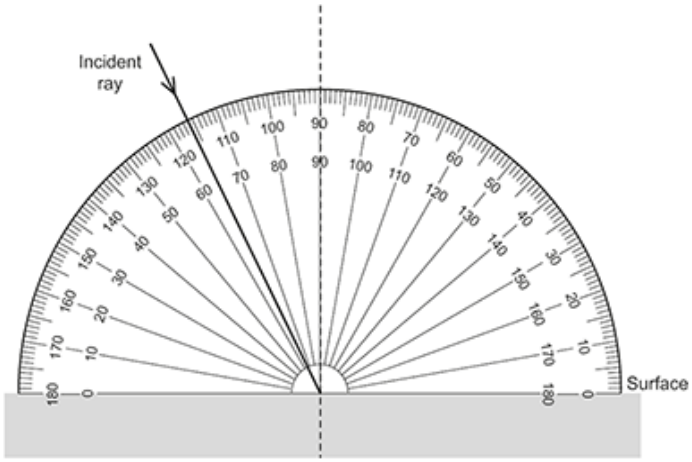


Fig. 16.2

Complete the ray diagram in **Fig. 16.2** to show how light passes through the periscope to the eye.

You must include a normal line in your completed ray diagram on Mirror 2. **[3]**

7. A ray of light hits a surface.



What is the angle of incidence?

A 26°
B 64°
C 76°
D 116°

Your answer ☐ **[1]**

END OF QUESTION PAPER