

NAME
SCHOOL

INDEX NUMBER
DATE

RECTILINEAR PROPAGATION OF LIGHT

1. 1995 Q9 P1

What property of light is suggested by the formation of shadows? (1 mark)

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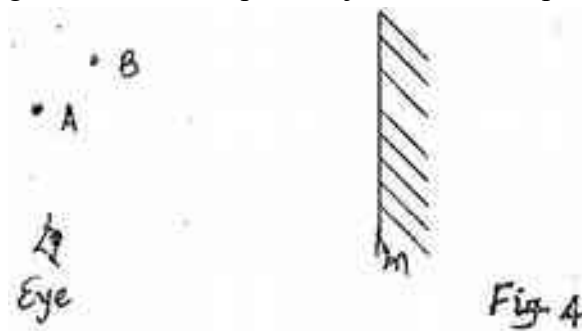
2. 1996 Q8 P1

A vertical object placed on a bench is observed to have three shadows of different sharpness, in different directions. Explain this observation (3 marks)

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3. 1997 Q10 P1

Figure 4 shows two point objects A, and B, placed in front of a mirror M



Sketch a ray diagram to show the positions of their images as seen by the eye.

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4. 1998 Q27 P1

During total eclipse of the sun, both light and heat are observed to disappear simultaneously. Explain the observation.

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5. 1998 Q32 P1

Fig 11 shows a double slit placed in front of a source, S of waves, and a director D is placed beyond the slits, such that its position can be adjusted along the line XY .



State with a reason, what the detector records along XY .

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6. 1998 Q33 P1

What is meant by virtual image?

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7. 1999 Q8 P1

Figure 6 shows a ray of light incident on plane mirror at point O .

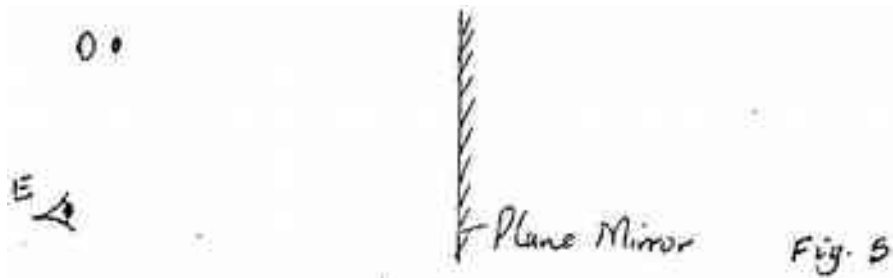


The mirror is rotated clockwise through an angle 30° about an axis perpendicular to the paper. Determine the angle through which the reflected ray rotated.

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8. 2000 Q9 P1

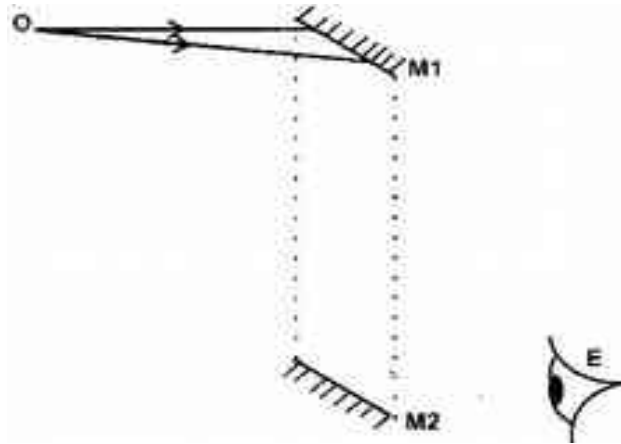
Fig. 5 shows an object O placed in front of a plane mirror.



On the same diagram draw rays to locate the position of the image I, as seen from the eye E.

9. 2001 Q8 P1

Fig. 6 shows an object O being viewed using two inclined mirrors M_1 and M_2 . Complete the diagram by sketching rays to show the position of the image as seen by the eye E.



10. 2003 Q8 P1

Figure 6 shows a ray of light being reflected from a mirror.

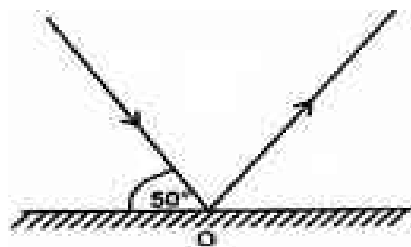


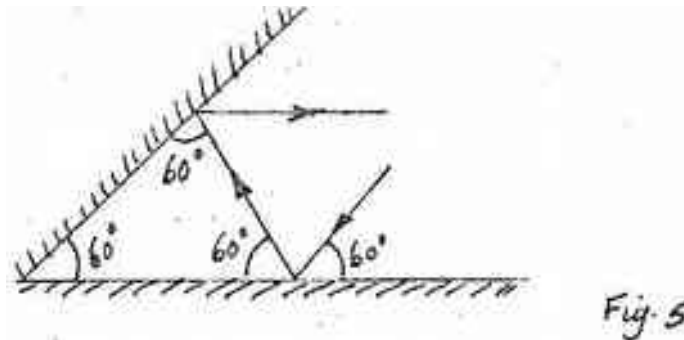
Figure 6

What is the angle of reflection?

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11. 2004 Q7 P1

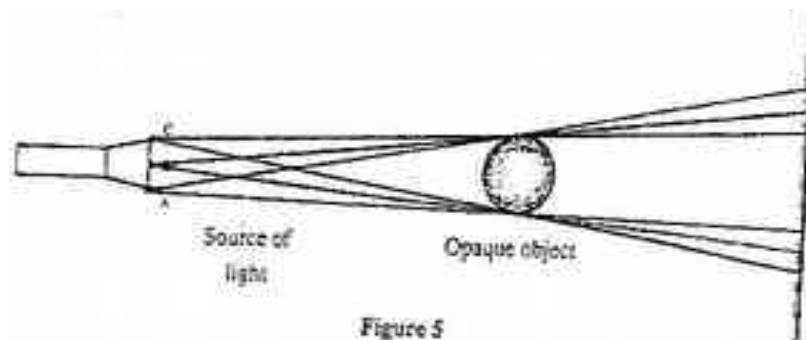
Figure 5 shows two mirrors inclined at an angle of 60° to each other. A ray of light is shown



Sketch the same diagram, the path of the ray until it leaves the two mirrors. Indicate the angles at each reflection.

12. 2005 Q6 P1

Fig 5. Shows an arrangement of a source of light, an opaque object and a screen.



Using A, B and C as point sources, sketch on the same figure labelled ray diagram to show what is observed on the screen. (2 marks)

13. 2006 Q2 P2

In a certain pinhole camera, the screen is 10cm from the pinhole. When the camera is placed 6m away from a tree, a sharp image of the tree 16cm high is formed on the screen. Determine the height of the tree.

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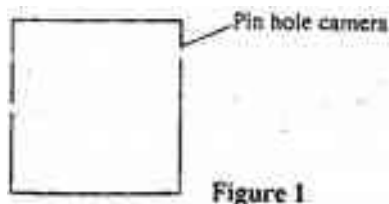
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14. 2007 Q1 P2

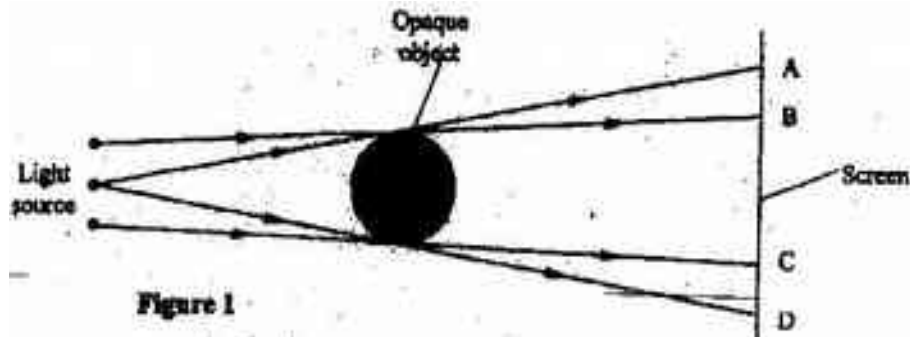
Figure 1 represents a pinhole camera



Sketch rays to show the formation of an enlarged image in the camera. Label both the object and the image (2 marks)

15. 2008 Q1 P2

Figure 1 shows three point sources of light with an opaque object placed between them and the screen.



Explain the nature of the shadow formed along B and C. (2marks)

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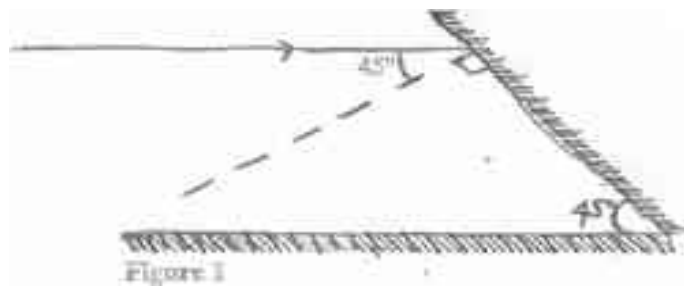
16. 2009 Q1 P2

State the number of images formed when an object is between two plane mirrors placed in parallel (1mark)

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17. 2009 Q2 P2

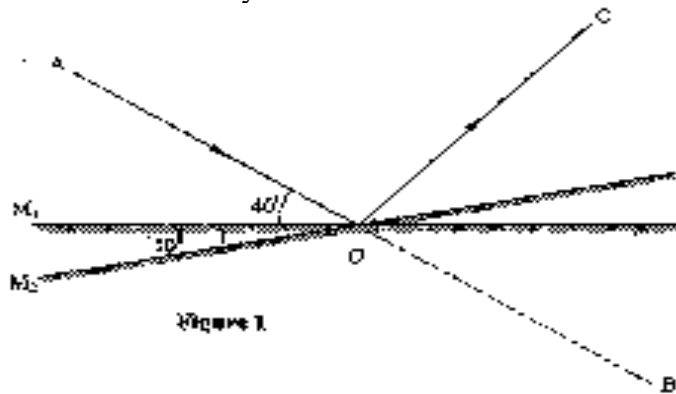
Figure 1 shows a ray of light incident on a mirror at an angle of 45° . Another mirror is placed at an angle of 45° to the first one as shown. .



Sketch the path of the ray until it emerges. (2 marks)

18. 2010 Q1 P1

Figure 1, shows a ray of light incident on a plane mirror at O. The mirror is then rotated anticlockwise about O from position M_1 to position M_2 through an angle of 10° . The final reflected ray is OC.

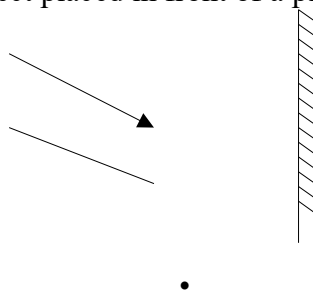


Determine the angle of deviation BOC.

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19. 2011 Q1 P2

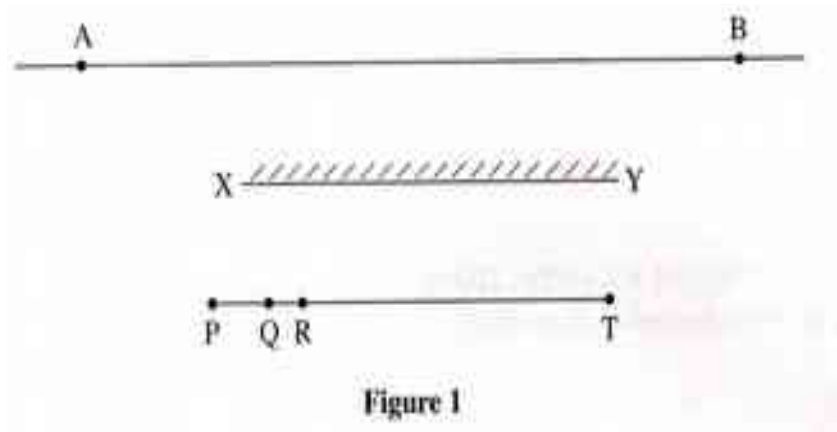
Figure 1 shows an object placed in front of a plane mirror.



Sketch the image of the object as seen in the mirror. (1 mark)

20. 2012 Q1 P2

Figure 1, show a plane mirror XY placed equidistant from two parallel lines AB and PT.



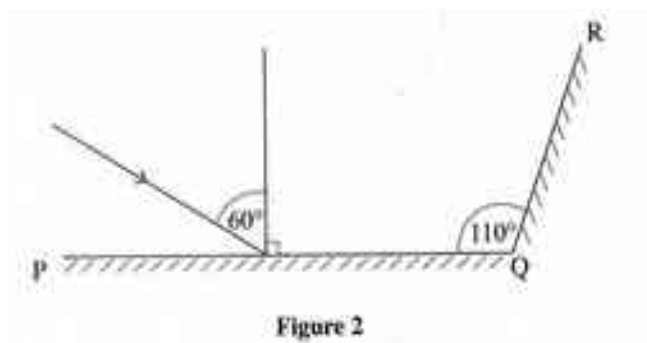
Four students stand at P, Q, R and T in front of the mirror

- Indicate the positions of the images of students at Q, R and T on line AB (1 mark)
- State which of the tree images are visible to the student standing at P. (1 mark)

- Using rays indicate on the figure, how (b) above is possible (1 mark)

21. 2012 Q2 P2

Figure 2. Shows two mirrors PQ and QR inclined at an angle of 110° . A ray of light is incident on mirror PQ at an angle of 60° .



Complete the diagram to determine the angle of reflection of the ray in the mirror QR. (3 marks)