

Lower Secondary Science

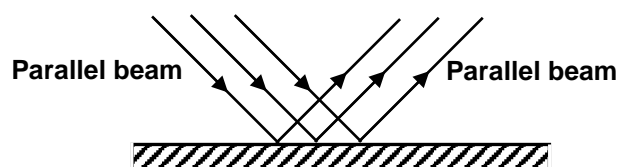
Reflection
Standard Worksheet 1

Name :

Date :

Section A

1. The diagram below shows _____.



- A even reflection
 C regular reflection
- B smooth reflection
 D diffused reflection ()
2. Good reflectors of light are usually _____.
- A dark and rough
 C rough and opaque
- B transparent and smooth
 D smooth and polished ()
3. Which of the following is an example of a non-luminous object?
- A A burning candle
 C A star
- B The moon
 D The sun ()
4. Why is a person unable to see the sun during a solar eclipse?
- A The sun is between the moon and the earth.
 B The moon is between the earth and the sun.
 C The earth is between the moon and the sun.
 D The moon is between the earth and the stars. ()
5. Which of the following statements about opaque, transparent and translucent objects is **false**?
- A Opaque means cannot see through.
 B A translucent object gives off light of its own.
 C A transparent object allows almost all light falling on it to pass through.
 D A translucent object diffuses or scatters light and allows only some light to pass through. ()
6. John is studying at his desk using only a strong table lamp. He has drawn his room's curtains and has closed the door to reduce distractions. Which of the following statements is **untrue**?
- A He is able to read his textbook due only to light from the lamp.
 B He is able to see a shadow of himself because light travels in straight lines.
 C He is not likely to stare into the lamp because it is uncomfortable.
 D He is able to read because his book is luminous. ()

7. How much light an object reflects depends on the _____.

- (i) nature of the material
- (ii) state of its surface
- (iii) intensity of light falling on the surface
- (iv) thickness of the material

- A (i) and (iii) B (ii) and (iv)
 C (i), (ii) and (iii) D (i), (ii) and (iv) ()

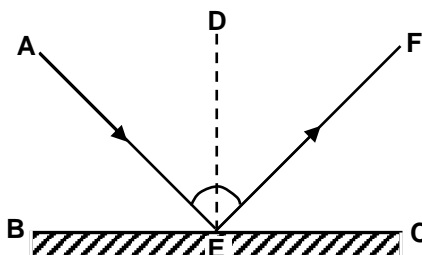
8. Regular reflection is observed when light falls on all of the following except _____.

- A water in stagnant pond B a flat metal sheet
 C a piece of wood D a polished marble table ()

9. What kind of mirror does a dentist use to magnify the image of your teeth?

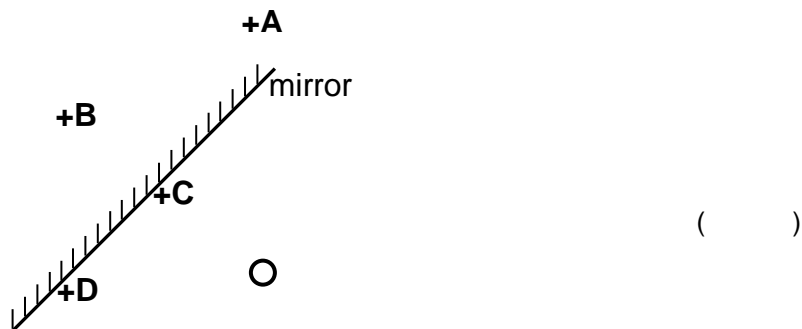
- A Concave B Convex
 C Plain D Rear ()

10. BC is a mirror with AE as the incident ray. Which of the following statement about the ray diagram is **false**?



- A DE is the normal to the mirror BC.
 B Angle AED is equal to angle DEF.
 C Angle AEB is equal to angle FEC.
 D Angle DEC is slightly less than 90 degrees. ()

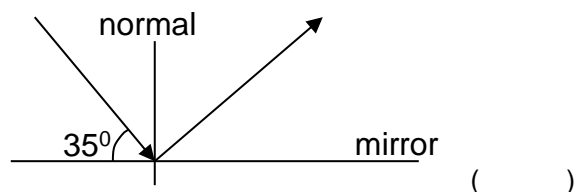
11. Object **O** is placed in front of a mirror. In which position will the image of **O** be seen by the viewer, as shown in the diagram?



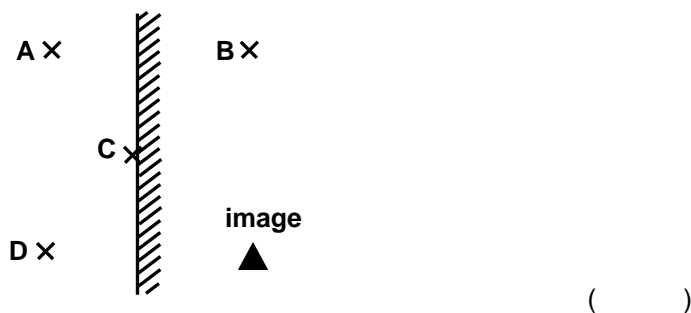
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12. The diagram below shows the reflection of a ray of light in a plane mirror. The angle of reflection is_____.

- A 35°
- B 40°
- C 50°
- D 55°



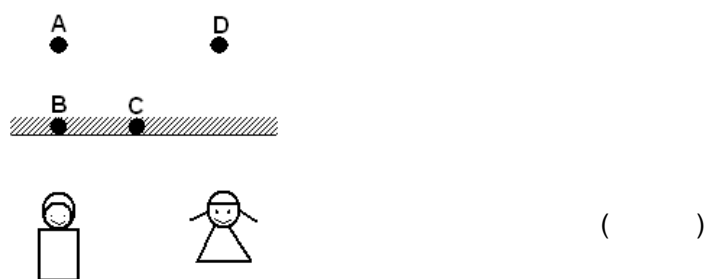
13. The diagram shows a plane mirror and the position of an image. Where must the object be placed to form this image?



14. What is the definition of a transparent object?

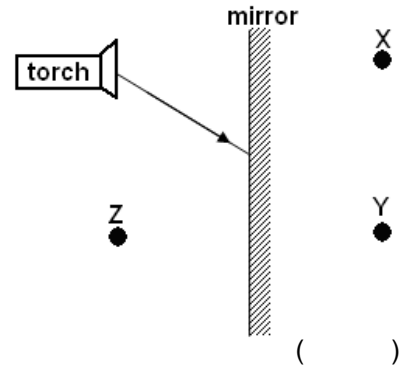
- A It allows almost all the light falling on it to pass through.
- B It does not allow light to pass through.
- C It diffuses or scatters light and allows only some light to pass through.
- D It gives out light of its own.

15. Jack and Jill stood together in front of a large plane mirror. They are both the same distance from the mirror, as shown below. Where is the Jill's image?



16. The diagram shows a ray of light from a pocket torch striking a plane mirror.

The image of the torch formed by the mirror is at



- A X and real.
 B X and virtual.
 C Y and virtual.
 D Z and real.

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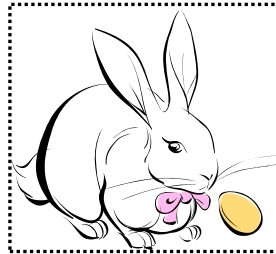
17. The use of a _____ mirror makes our face look bigger and therefore dressing mirrors are an example of such mirrors.

- A convex
 B concave
 C plane
 D plain

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18. The figure below shows a rabbit placed in front of a mirror. Which of the following options shows the correct image of the rabbit?

TOP



BOTTOM

A



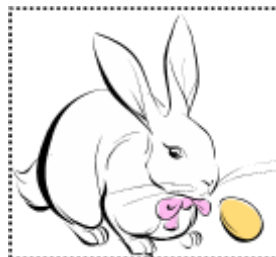
B



C



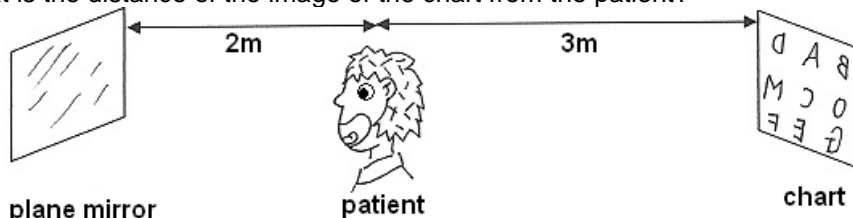
D



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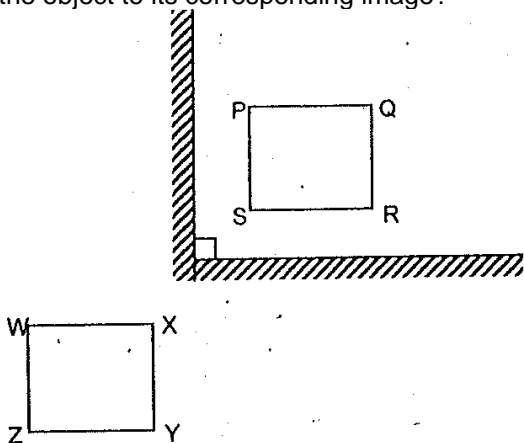
19. Judy is holding a mirror 20 cm in front of her. How far are her eyes to the image of her face in the mirror?
 A 25cm
 C 40cm
 B 5m
 D 0.5m ()

19. What is the distance of the image of the chart from the patient?



- A 2m
 C 7m
 B 5m
 D 10m ()

20. A square PQRS is placed near the corner between 2 identical plane mirrors perpendicular to each other. The image WXYZ is produced as shown. Which of the following correctly matches the corners PQRS of the object to its corresponding image?

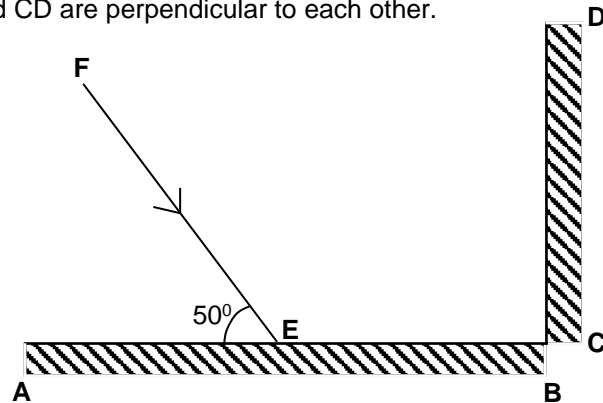


| | Image of P | Image of Q | Image of R | Image of S |
|---|------------|------------|------------|------------|
| A | Z | Y | X | W |
| B | Y | Z | W | X |
| C | X | W | Z | Y |
| D | W | X | Y | Z |

()

Section B

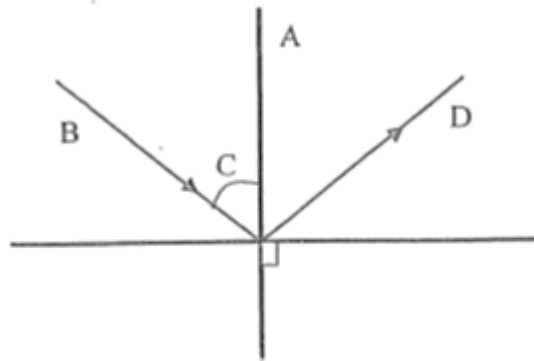
1. Mirrors AB and CD are perpendicular to each other.



- a. State the name of light ray FE. [1]
- b. The angle of reflection on the mirror AB is _____ . [1]
- c. The angle of incidence on the mirror CD is _____ . [1]
- 2 a. Give the description of a convex mirror. [1]
- b. Write down two examples of how a convex mirror can be used. [2]
- 3 a. During a solar eclipse, a person is unable to see the sun. What is the scientific explanation for this? How can an experiment in the laboratory be used to prove this same law? [2]
- b. Write down the two basic laws of reflection. [2]

- 4 a. Jenny looks at her watch and she sees from the watch-hands that the time is 8.30 am. What is the time of the watch's image if she places it in front of the mirror? [1]
- b. What is the characteristic of images in mirrors as shown in question 4a? Give the remaining characteristics of images formed in mirrors? [2]

5. Label the ray diagram below. Write your answers in the blanks provided. [2m]



A: _____

B: _____

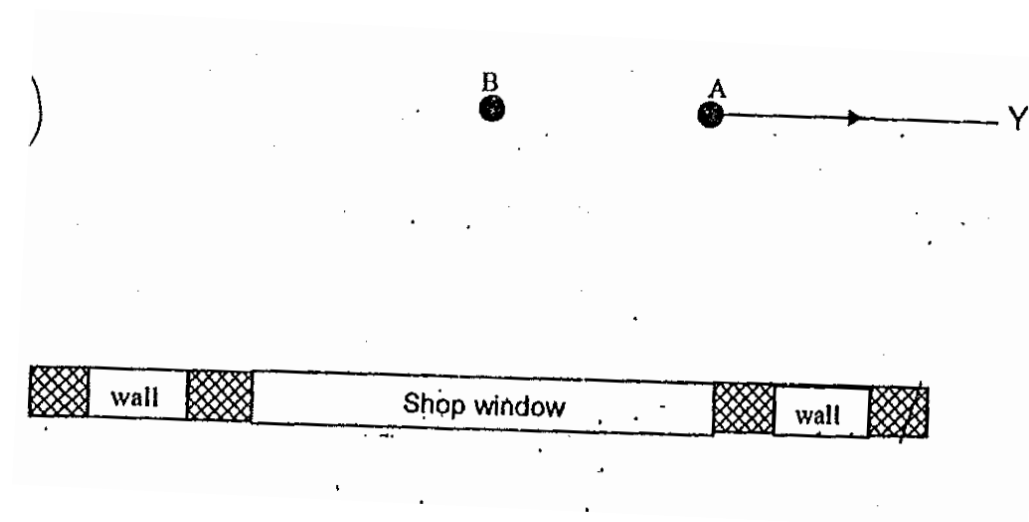
C: _____

D: _____

6. State 5 properties of image formed by a plane mirror

Section C

1. A person standing at point A in the figure below sees the reflection in a shop window of a person standing at point B.



- i) Mark a letter I, the position of the image of B formed by reflection in the shop window. [1]
- ii) The person at A moves further away from B towards Y in the direction shown in the figure. Mark a letter X, the furthest position along Y to which the person A can move so that the 2 people will still be able to see each other by reflection in the shop window. [1]
- iii) On the figure, draw a ray of light to show how, by reflection, the person at B sees the person at X. [2]



2. Complete the diagram below by drawing two light rays to show how the eyes views the image of the arrow (object) in the mirror. Label the image clearly. [3m]

