

## Chapter 14: Light and the Formation of Shadows

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### EXERCISE [PAGE 104]

#### Exercise | Q 1.1 | Page 104

**Choose an appropriate word and fill in the blank.**

A \_\_\_\_\_ is a natural source of light.

(options : seven, star, through, transparent, opaque, colors, shape, erect, inverted, luminous, candle)

### SOLUTION

A star is a natural source of light.

#### Exercise | Q 1.2 | Page 104

**Choose an appropriate word and fill in the blank.**

A \_\_\_\_\_ is an artificial source of light.

(options : seven, star, through, transparent, opaque, colors, shape, erect, inverted, luminous, candle)

### SOLUTION

A candle is an artificial source of light.

#### Exercise | Q 1.3 | Page 104

**Choose an appropriate word and fill in the blank.**

When light passes through a prism, it gets separated into \_\_\_\_\_ colours.

(options : seven, star, through, transparent, opaque, colors, shape, erect, inverted, luminous, candle)

### SOLUTION

When light passes through a prism, it gets separated into seven colours.

#### Exercise | Q 1.4 | Page 104

**Choose an appropriate word and fill in the blank.**

The image obtained in the pinhole camera is \_\_\_\_\_.

(options : seven, star, through, transparent, opaque, colors, shape, erect, inverted, luminous, candle)

### SOLUTION

The image obtained in the pinhole camera is inverted.

#### Exercise | Q 1.5 | Page 104

**Choose an appropriate word and fill in the blank.**

A shadow is formed when an \_\_\_\_\_ object comes in the way of light.

(options : seven, star, through, transparent, opaque, colors, shape, erect, inverted, luminous, candle)



### SOLUTION

A shadow is formed when an **opaque** object comes in the way of light.

### Exercise | Q 1.6 | Page 104

**Choose an appropriate word and fill in the blanks.**

When a \_\_\_\_\_ object comes in the way of light, light passes \_\_\_\_\_ it.  
(options: seven, star, through, transparent, opaque, colors, shape, erect, inverted, luminous, candle)

### SOLUTION

When a **transparent** object comes in the way of light, light passes **through** it.

### Exercise | Q 2 | Page 104

Write whether of the following objects are luminous or non-luminous.

Object	Luminous/Non-luminous
A book	
A burning candle	
A wax cloth	
A pencil	
A pen	
A light bulb	
A tyre	
A torch	

### SOLUTION

Object	Luminous/Non-luminous
A book	Non-luminous
A burning candle	Luminous
A wax cloth	Non-luminous
A pencil	Non-luminous
A pen	Non-luminous
A light bulb	Luminous
A tyre	Non-luminous
A torch	Luminous



### Exercise | Q 3 | Page 104

Match the following.

Group A	Group B
(a) Mirror	(1) Non-luminous
(b) Firefly	(2) Inverted image
(c) Pinhole camera	(3) Reflection
(d) Moon	(4) Luminous

#### **SOLUTION**

Group A	Group B
(a) Mirror	(3) Reflection
(b) Firefly	(4) Luminous
(c) Pinhole camera	(2) Inverted image
(d) Moon	(1) Non-luminous

### Exercise | Q 4.1 | Page 104

**Write the answer to the following.**

What things are necessary for the formation of a shadow?

#### **SOLUTION**

The things necessary for the formation of a shadow are:

- A source of light
- An opaque object whose shadow has to be formed
- A screen on which shadow is to be formed

### Exercise | Q 4.2 | Page 104

**Write the answer to the following.**

When can an object be seen?

#### **SOLUTION**

An object is seen when the light rays reflected from its surface reaches our eyes.

### Exercise | Q 4.3 | Page 104

**Write the answer to the following.**



What is a shadow?

**SOLUTION**

Shadow is a dark patch obtained on a screen where the light from a light source is blocked by an opaque object.