

EXERCISE 15.4**PAGE: 289**

1. A bulb is kept burning just right above the following solids. Name the shape of the shadows obtained in each case. Attempt to give a rough sketch of the shadow. (You may try to experiment first and then answer these questions).

(i)



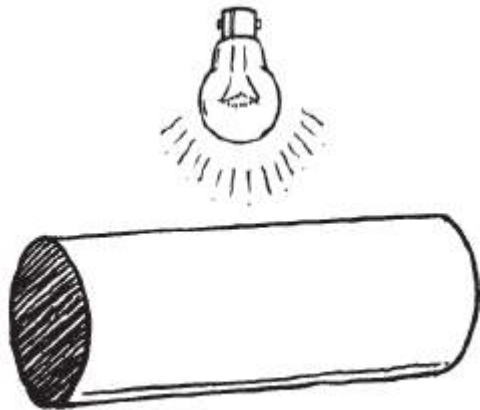
A ball

Solution:-



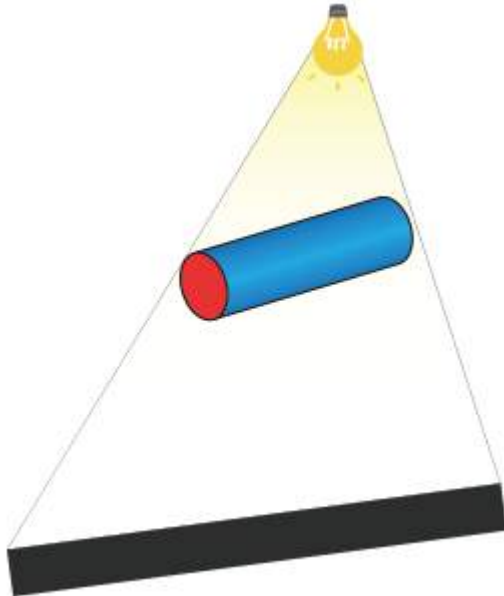
The shape of the shadow obtained from a ball is circle.

(ii)



A cylindrical pipe

Solution:-



The shape of the shadow obtained from a cylindrical pipe is rectangle.

(iii)



A book

Solution:-

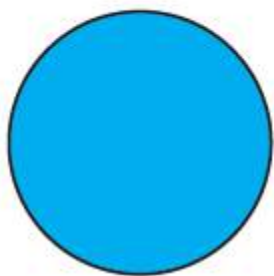


The shape of the shadow obtained from a book is rectangle.

2. Here are the shadows of some 3-D objects, when seen under the lamp of an overhead projector. Identify the solid(s) that match each shadow. (There may be multiple answers for these!)

(i)

A circle



Solution:-

Cricket ball, water bottle cap, Disc

(ii)

A square



Solution:-

Die, chalk box etc.

(iii)

A triangle



Solution:-

Birthday cap etc.

(iv)

A rectangle



Solution:-

Book, keyboard, Mobile etc.

3. Examine if the following are true statements:

(i) The cube can cast a shadow in the shape of a rectangle.

Solution:-

The above statement is true.

(ii) The cube can cast a shadow in the shape of a hexagon.

Solution:-

The above statement is false.