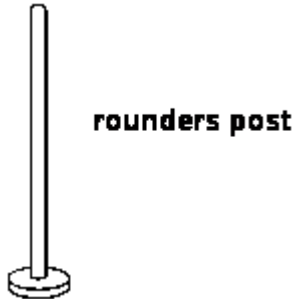


**Q1. Shadows**

- (a) One sunny day, some children use a rounders post to make shadows in their playground.



When light shines on the rounders post, a shadow forms.

Where does the light come from?



.....

1 mark

- (b) The rounders post makes a dark shadow.

Tick **ONE** box to complete the sentence below.

The rounders post makes a **dark** shadow because it is...

opaque.

☐

smooth.

☐

solid.

☐

transparent.

☐

tall.

☐

heavy.

☐

1 mark

- (c) The children draw round the shadow of the rounders post every half hour from 9:30 until 12 noon.



They measure the length of each shadow and record their results in this table:

Time (am)	Length of shadow (cm)
9:30	146
10:00	130
10:30	116
11:00	109
11:30	106
12:00	103

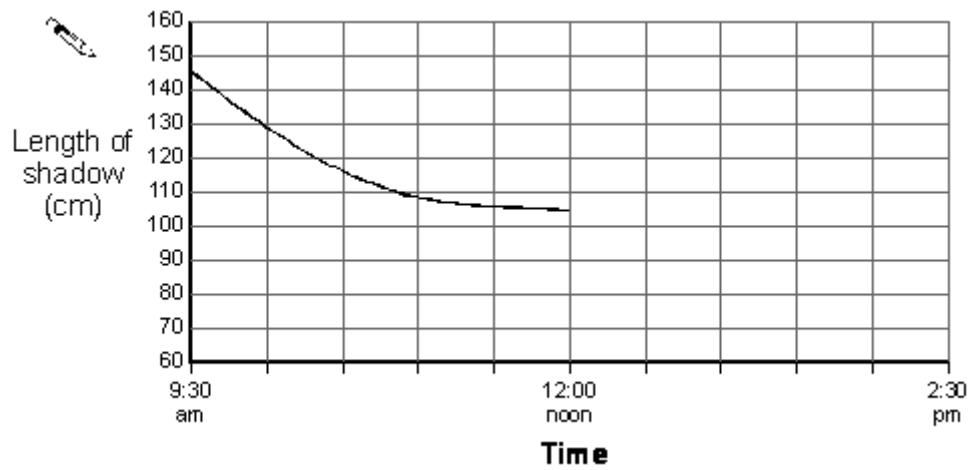
What happened to the length of the shadow during the morning?

 .....

1 mark

- (d) The children make a line graph to show the results from the morning.

Continue the line on the graph to show how the length of the shadow would change between 12 noon and 2:30pm.



1 mark

## Q2. Lamp

- (a) At night, Ben switches on the lamp in his room.

There is a shadow of the chair on the floor.

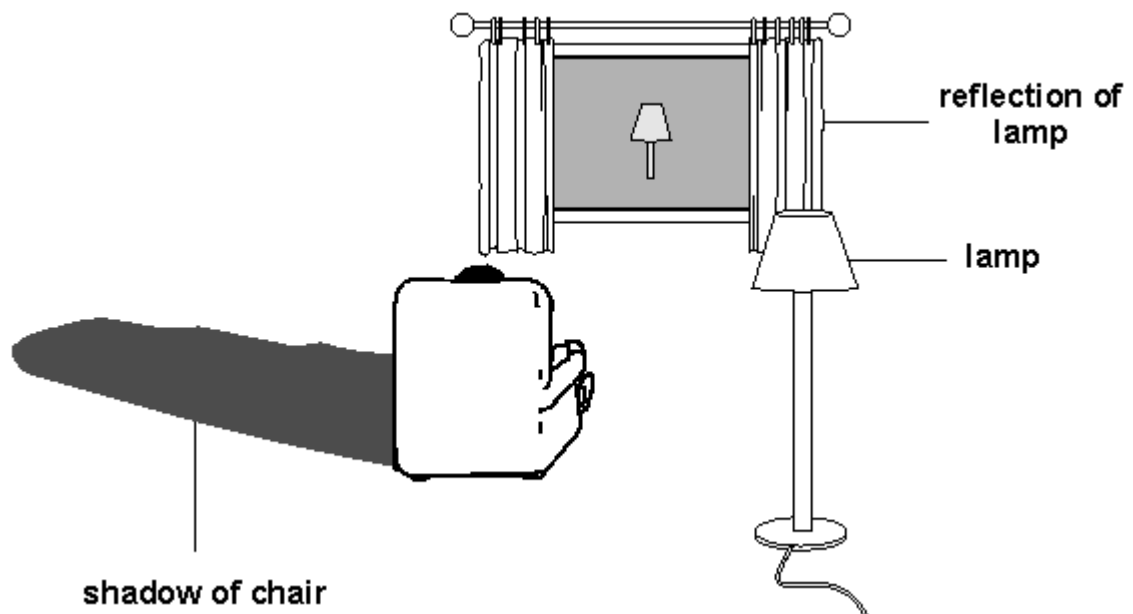
Explain how the shadow is formed from the light of the lamp.

.....

.....

1 mark

- (b) Ben looks at the window, and sees a reflection of the lamp.



Why is there a reflection of the lamp in the window?

Tick **ONE** box.

There is a reflection of the lamp in the window because the window is . . .

shiny

☐

hard

☐

strong

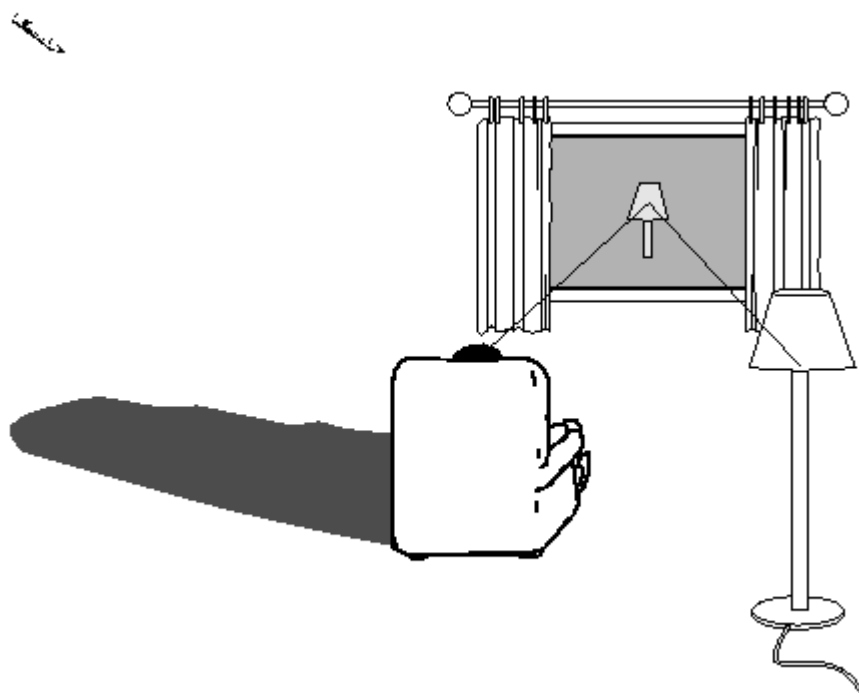
☐

solid

☐

1 mark

- (c) Draw **TWO** arrowheads on the lines in the picture below to show how light travels to let Ben see the reflection of the lamp.



1 mark