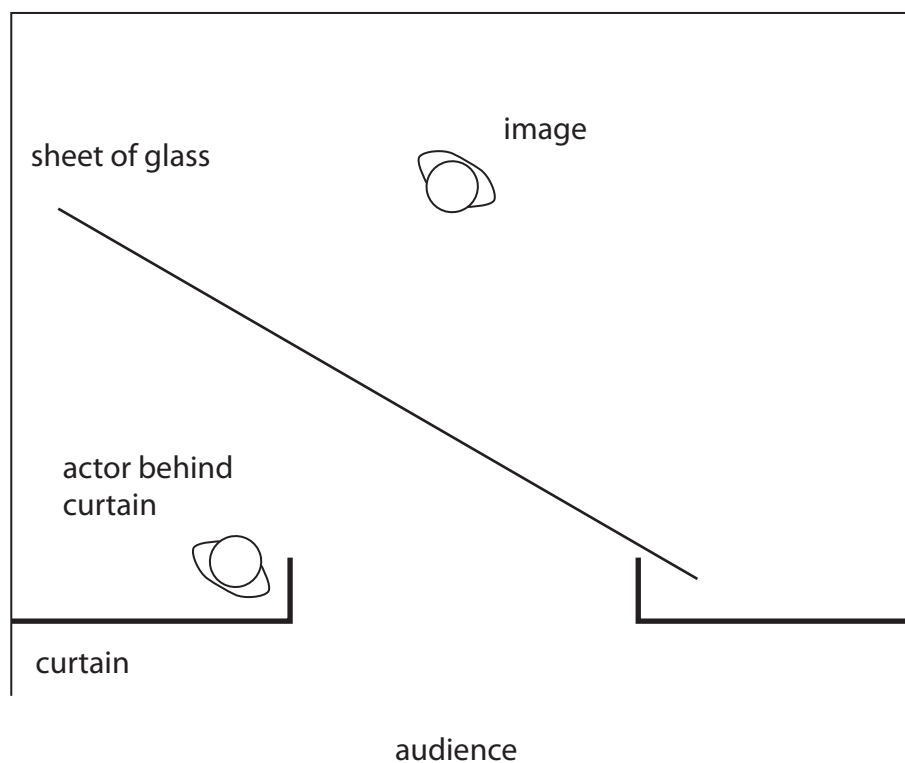


**2** Pepper's Ghost is a theatre effect used to make it appear that there is an image on stage.

The diagram shows a theatre viewed from above.

A sheet of glass is placed on the stage. A brightly lit actor stands behind a curtain at the side of the stage.

The audience sees the reflection of this actor in the glass.



- (a) Add a ray diagram to show how light from the actor appears to come from the image.

(3)

- (b) The image formed by the glass is a virtual image.

State what is meant by the term **virtual image**.

(1)

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(c) Light travels as a transverse wave.

Some waves travel as longitudinal waves.

(i) Give an example of a wave that travels as a longitudinal wave.

(1)

(ii) Describe the difference between transverse waves and longitudinal waves.

You may draw diagrams to help your answer.

(3)

(Total for Question 2 = 8 marks)

