

Converging Lens Ray Diagrams

Success criteria:

Remember when drawing ray diagrams to draw arrows on your light rays.

Draw dotted lines for virtual rays.

Label the position of the focus, object and image.

1. An object 2 cm high is placed 6 cm from a converging lens of focal length 2 cm.
 - a) Draw a ray diagram on graph paper.
 - b) Describe the position, size and nature of the image.
 - c) Calculate the magnification
2. An object 1 cm high is placed 4 cm from a converging lens of focal length 3 cm.
 - a) Draw a ray diagram on graph paper.
 - b) Describe the position, size and nature of the image.
 - c) Calculate the magnification of the image.
 - d) Find the value of $\frac{\text{distance of image from lens}}{\text{distance of object from lens}}$
 - e) What do you notice when you compare this to the magnification?
3. An object 1 cm high is placed 3 cm from a magnifying glass of focal length 4 cm.
 - a) Draw a ray diagram on graph paper (full size).
 - b) Describe the position, size and nature of the image.
 - c) Calculate the magnification of the image.

Converging Lens Ray Diagrams

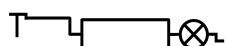
Success criteria:

Remember when drawing ray diagrams to draw arrows on your light rays.

Draw dotted lines for virtual rays.

Label the position of the focus, object and image.

1. An object 2 cm high is placed 6 cm from a converging lens of focal length 2 cm.
 - a) Draw a ray diagram on graph paper.
 - b) Describe the position, size and nature of the image.
 - c) Calculate the magnification.
2. An object 1 cm high is placed 4 cm from a converging lens of focal length 3 cm.
 - a) Draw a ray diagram on graph paper.
 - b) Describe the position, size and nature of the image.
 - c) Calculate the magnification of the image.
 - d) Find the value of $\frac{\text{distance of image from lens}}{\text{distance of object from lens}}$
 - e) What do you notice when you compare this to the magnification?
3. An object 1 cm high is placed 3 cm from a magnifying glass of focal length 4 cm.



- a) Draw a ray diagram on graph paper (full size).
- b) Describe the position, size and nature of the image.
- c) Calculate the magnification of the image.

