

GCSE Physics Magnification Equation – 10 Ramped Real-Life Questions

Magnification is used to describe how much bigger or smaller an image appears compared to the actual object. These questions become gradually more challenging and involve microscopes, cameras, projectors and everyday situations.

1. A small insect is 4 mm long. Under a microscope, its image is 20 mm long. Calculate the magnification.
2. A grain of pollen is 0.5 mm wide. A microscope image shows it as 10 mm wide. Calculate the magnification.
3. A biology student observes a cell that is 0.02 mm long. The image on the screen measures 8 mm. Calculate the magnification.
4. A projector displays a company logo that is originally 15 cm wide. The projected image is 180 cm wide. Calculate the magnification.
5. A camera sensor records an image of a flower that is 3 cm tall. The flower is actually 12 cm tall. Calculate the magnification.
6. A microscope image of a bacterium is 15 mm long and the magnification is 3000. Calculate the actual length of the bacterium.
7. A projected image on a classroom screen is 4.8 m wide. The original slide was 24 cm wide. Calculate the magnification.
8. A photograph of a spider measures 9 cm across. The real spider is 18 mm across. Calculate the magnification.
9. A microscope image of a blood cell measures 12 mm in diameter. The actual diameter of the cell is 0.008 mm. Calculate the magnification.
10. A scientist photographs a tiny crystal. The image measures 16 cm long and the magnification is 800. Calculate the actual length of the crystal in millimetres.