Foundation Combined — only core Foundation content included.

Q1. Write the formula for calculating magnification.

[1 mark]

Q2. A cell image is 45 mm long at ×300 magnification. (a) Calculate the actual cell length in mm. (b) Convert this to µm.

[3 marks]

Q3. Describe how to prepare a slide of onion cells for viewing under a light microscope.

[3 marks]

Total: 7 marks

E: Microscopy

Q1 (1 mark)

Write the formula for calculating magnification.

- Magnification = Image size ÷ Actual size [1]

Q2 (3 marks)

A cell image is 45 mm long at ×300 magnification. (a) Calculate the actual cell length in …

- (a) Actual size = 45 ÷ 300 = 0.15 mm [1]
- (b) 0.15 mm × 1000 = 150 µm [1]
- Units stated correctly in both answers [1]

Q3 (3 marks)

Describe how to prepare a slide of onion cells for viewing under a light microscope.

- Cut a thin section of onion epidermis / peel a single layer [1]
- Place on a glass slide with a drop of water / iodine stain [1]
- Carefully lower a coverslip at 45° to avoid air bubbles [1]