

**Science Individual Topic tests (Microscopes and magnification, Animal and plant cells, Eukaryotes and Prokaryotes, and Specialised animal cells) Questions**

1. A specimen is 50μm wide. Calculate the width of the image of the specimen under a magnification of x100. Give your answer in mm. (2)
2. A mitochondrion is approximately 0.0025 mm long. Write this figure in standard form. (2)
3. An onion cell is viewed under the microscope with x100 magnification. The image of the cell is 7.5 mm width. What is the real width of the onion cell? Give your answer in μm. (2)
4. Why might you add stain to the sample on a microscope slide? (2)
5. Which microscope gives a higher resolution- Light microscope or electron microscope? (1)
6. Give two differences in structure between prokaryotic and eukaryotic cells. (2)
7. Name five subcellular structures that both plan and animal cells have. (5)
8. What three things do plant cells have that animal cells do not? (3)
9. What types of organisms are bacteria – prokaryotes or eukaryotes? (1)
10. What is cell differentiation? (2)
11. Give three way a sperm cell is adapted for swimming to an egg cell. (3)
12. How are the nerve cells specialised for rapid signalling? (3)