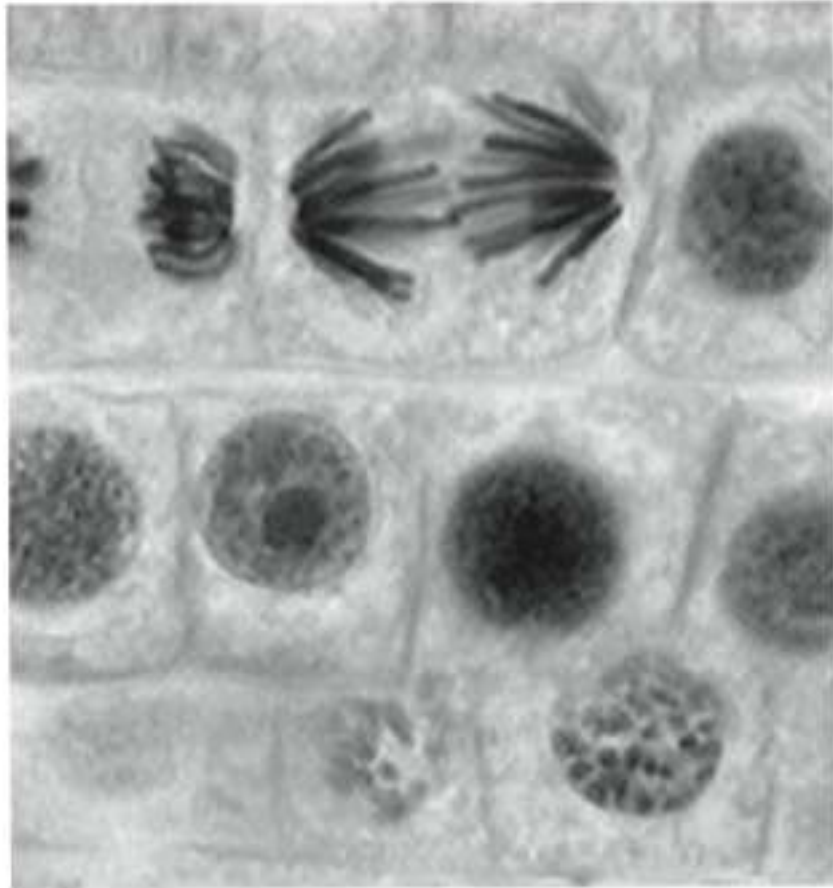


0 1

The diagram shows root cells undergoing cell division. The cells are at various stages of dividing.



0 1 . 1

Name the type of cell division that is shown in the diagram.

[1 mark]

Mitosis

0 1 . 2

What happens inside a cell before it divides?

[2 marks]

Tick **two** box'.

chromosomes duplicate

sub-cellular structures increase in number

the cytoplasm divides

the chromosomes are splitting

0	1
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 .

3

Why is this type of cell division important for an organism?

[2 marks]

Asexual reproduction [1]
growth [1]
cell replacement or tissue repair [1]

0	1
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 .

4

In a tissue sample of 140 cells, 7 cells are in the last stage of mitosis. One complete cell cycle in this tissue takes 1600 minutes. How long does the last stage in mitosis take for an average cell in this tissue? [2 marks]

$7/140 \times 100 = 5\%$ cells; $0.05 \times 1600 = 80$ minutes
2 marks can be awarded with no working shown if answer is correct