B1 L6 Cell division: mitosis: Exam questions worksheet

AQA GCSE Combined Science: Trilogy (8464) and Biology (8461)
Biology Paper 1 · Topic B1 Cell biology

Name _____ Class _____

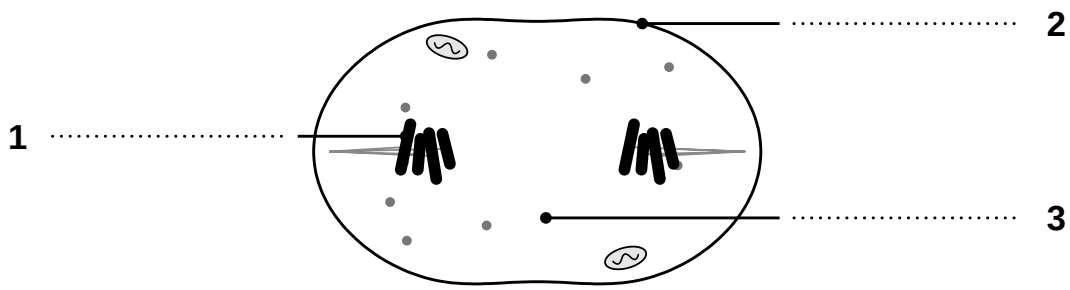
Total: ..... / 20

Instructions
- Answer **all** questions in the spaces provided.
- Use black ink or black ball-point pen.
- The marks for each question are shown in brackets.
- In calculations, show clearly how you work out your answer.
- Time: about 25 minutes.

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0 1 **Figure 1** shows an animal cell dividing.

Figure 1



0 1 . 1 **Complete Figure 1**. [3 marks]

Choose answers from the box.

cell membrane	cell wall	chromosome	cytoplasm	nucleus

0 1 . 2 What is happening to the cell in **Figure 1**? [1 mark]

Tick (✓) **one** box.

- The cell is copying its DNA. ☐
- The cell is growing. ☐
- One set of chromosomes is being pulled to each end of the cell. ☐
- The cytoplasm has finished dividing. ☐

Do not write outside the box

0 2 A student looked at cells from an onion root tip with a light microscope.

She counted the cells at three distances from the tip of the root.

Table 1 shows her results.

Table 1

Distance from the root tip in mm	Number of cells counted	Number of cells dividing
1	250	30
3	250	10
5	250	2

0 2 . 1 **Calculate** the percentage of cells dividing 1 mm from the root tip. [2 marks]

Percentage = ... %

0 2 . 2 **Describe** the pattern in the results in **Table 1**. [1 mark]

.....

.....

0 2 . 3 **Suggest** why very few cells are dividing 5 mm from the root tip. [1 mark]

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0 3 **Describe** what happens to a cell before mitosis starts. [3 marks]

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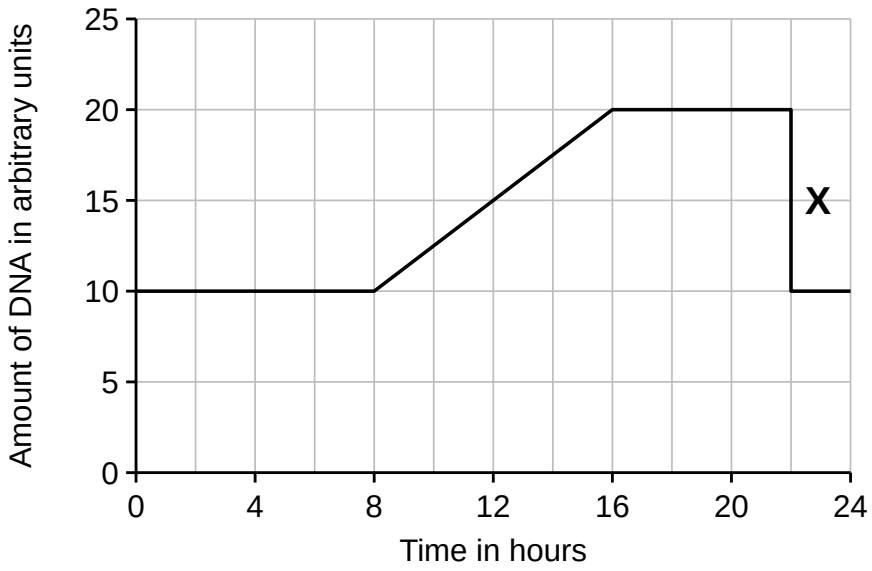
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Turn over for the next question

Do not write outside the box

0 4 **Figure 2** shows how the amount of DNA in a cell changes during one cell cycle.

Figure 2



0 4 . 1 At what time did the cell start to copy its DNA? [1 mark]

..... hours

0 4 . 2 **Explain** why the amount of DNA halves at **X**. [2 marks]

.....

.....

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Do not write outside the box

Turn over for the next question

0 5 Root tips grow because their cells divide by mitosis. [6 marks]

Describe what happens during the cell cycle of a root tip cell.

Explain how the cell cycle allows the root to grow.

Do not write outside the box

END OF QUESTIONS

There are no more questions in this paper. Original practice paper © sciencegcse.co.uk – free to use for non-commercial education. Not an AQA paper.