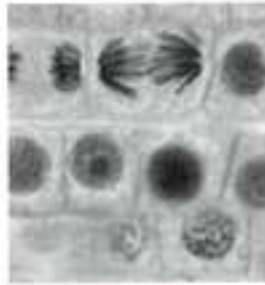


0 1

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

WARNING : In these questions your spelling of the words 'mitosis' and 'meiosis' must be spot on



0 1 . 1

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

Mitosis

[1 mark]

0 1 . 2

What happens to the genetic material before a cell divides

doubles/replicates/duplicates/copies itself [1 mark]

0 1 . 3

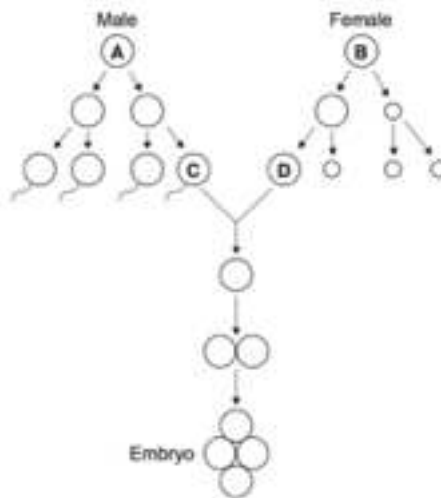
Why is this type of cell division important for an organism?

growth [1]; cell replacement or tissue repair [1]; asexual reproduction/cloning [1]

[2 marks]

WARNING : Make sure you don't say 'repair cells'. Mitosis is for repairing tissue, not cells.

The diagram below shows some types of cell division that take place during human reproduction



Name the type of cell division that produces cell D from cell B.

meiosis

[1 mark]

Why is this type of cell division important in producing cell C or cell D?

reduces or halves the number of chromosomes [1]; ensures the embryo/offspring have the correct/double/diploid set of chromosomes [1]

[2 marks]

0	1	.	5
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Meiosis and mitosis are different types of division in human cells. Compare the two processes by referring to where each takes place and the kind of products that are made.

meiosis	mitosis
sexual	asexual
gametes	growth
ovary or testes	all other cells
half number of chromosomes	same number of chromosomes
haploid or 23 chromosomes	diploid or 46 chromosomes
variation possible or not identical	or no variation or identical
4 cells produced	2 cells produced
2 divisions	1 division

[5 marks]

TOP TIP: This is a useful question to get under your belt as it could well be a 6 mark question. For this one, any five of the list will get you the marks.