

**GCSE Biology B (Twenty First Century Science)**  
**J257/02** Depth in Biology (Foundation)

**Question Set 14**

1 Gametes are types of cells used in sexual reproduction.

(a) What is the name of the human **male** gametes? **sperm** [1]

(b) How many gametes are required to make a new human life during sexual reproduction? **2** [1]

(c) Fertilisation takes place. The male gamete has the sex chromosome Y.

What sex chromosomes will the baby have, and what sex will it be?

**XY**  
**male**

[2]

(d) Human female gametes are released during ovulation. Ovulation can be prevented by taking hormone contraceptive pills.

Eve starts taking hormone contraceptive pills to prevent getting pregnant.

Explain why Eve could still become pregnant if she has unprotected sex after taking the contraceptive pill.

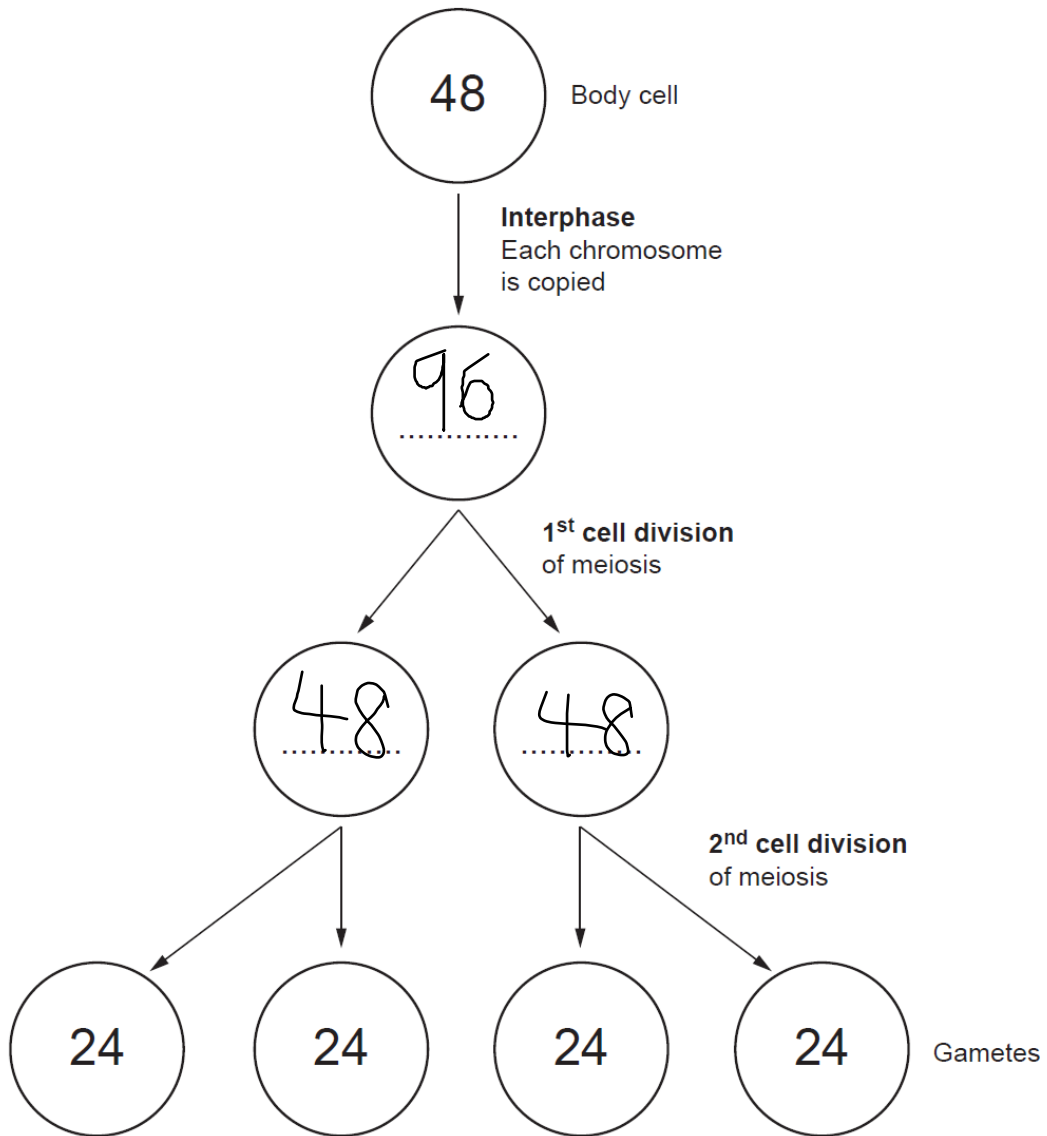
[2]

The sperm will still have entered the body before the contraceptive pill has taken effect. So, the ovum and sperm might still meet and the ovum could still be fertilised, causing conception.

(e) Gametes are made by a type of cell division called meiosis.

Meiosis in monkeys is shown in the diagram and it starts with a body cell. In monkeys, each body cell has 48 chromosomes.

Complete the diagram by writing the number of chromosomes in each empty cell.



[2]

**Total Marks for Question Set 14: 8**

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