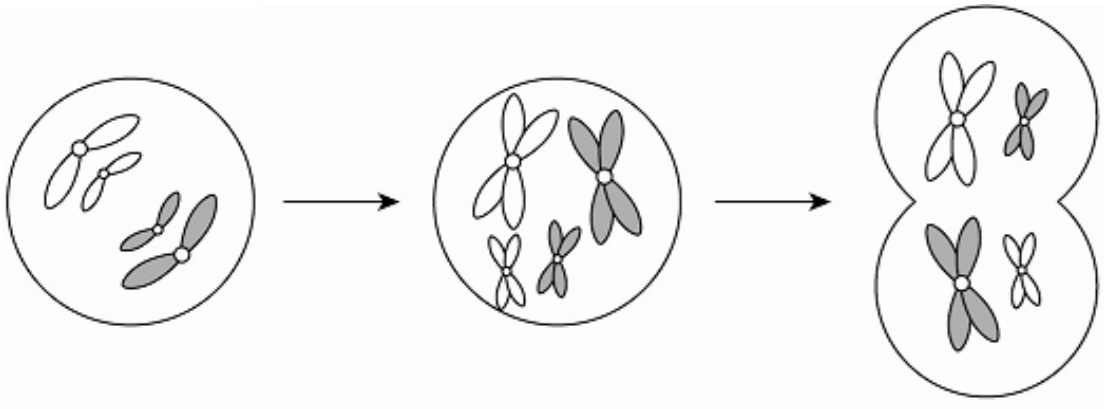
CHAPTER 3: HEREDITY AND VARIATION

1 Which statement about meiosis is correct?

A Organisms grow by the process of meiosis.
B All cells in our body carry out meiosis.
C The daughter cells formed during meiosis have the same number of genes as the parent cell.
D Each daughter cell has half the number of chromosomes of the parent cell.

2 The diagram below shows a type of cell division.



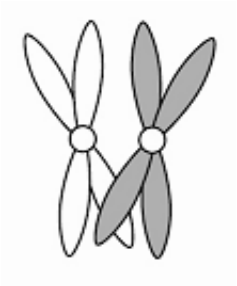
Name the type of cell division taking place. Give a reason for your answer.

_____

_____

[1 *mark*]

3 The diagram below shows two chromosomes during meiosis.



(a) What do we call each half of each chromosome?

_____

[1 *mark*]

(b) In which part of a cell do we find chromosomes?

_____

[1 *mark*]

(c) What actual process is taking place between the two chromosomes shown?

_____

[1 *mark*]

(d) State **one** consequence of this process.

_____

[1 *mark*]

4 (a) State the aim of each of the following processes.

i. Mitosis

_____

ii. Meiosis

_____

[2 *marks*]

(b) Which process given in (a) may bring about genetic variation in an organism?

_____

[1 *mark*]

(c) A woman has 46 chromosomes in a body cell. How many chromosomes are present in an egg cell of the woman?

_____

[1 *mark*]