

28 Which statement describes the effect of meiosis on chromosome number?

- A** A diploid parent cell produces diploid daughter cells.
- B** A diploid parent cell produces haploid daughter cells.
- C** A haploid parent cell produces diploid daughter cells.
- D** A haploid parent cell produces haploid daughter cells.

33 Four features of cell division are listed.

- 1 Haploid cells are produced.
- 2 New cells are genetically identical.
- 3 It is a reduction division.
- 4 It results in variation.

Which features would be associated with meiosis?

- A** 1, 2 and 3 **B** 1, 2 and 4 **C** 1, 3 and 4 **D** 2, 3 and 4

- 3 (a) Fig. 3.1 shows one stage involved in plant reproduction after pollination.

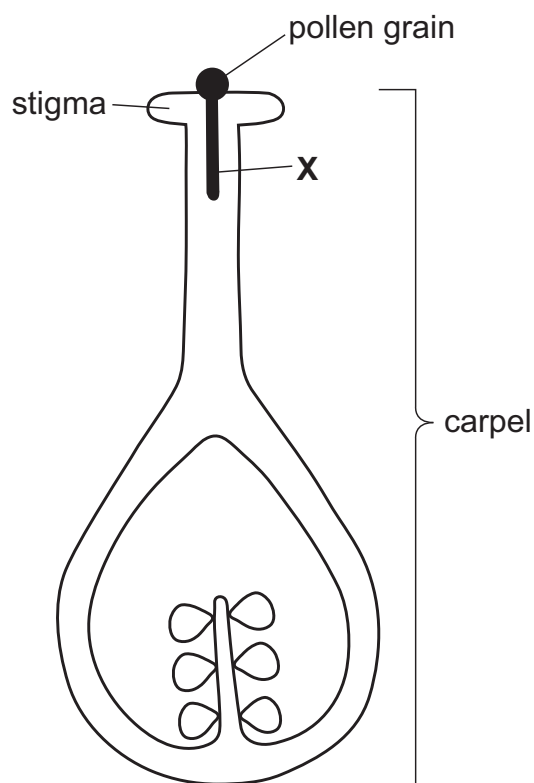


Fig. 3.1

- (i) State the name of the part labelled X in Fig. 3.1.

..... [1]

- (ii) Describe the events that occur after the stage shown in Fig. 3.1 that result in fertilisation.

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..... [3]

(b) A species of plant can use self-pollination and cross-pollination.

(i) Suggest reasons for this species of plant to use self-pollination rather than cross-pollination.

[3]

(ii) Discuss the potential effects of only using self-pollination in a population of plants.

[3]

(c) Meiosis produces gametes and is a source of genetic variation.

State **two other** sources of genetic variation in populations.

1

2

[2]

(d) Describe mitosis and its roles in organisms.

[4]

(e) State the name of the unspecialised cells that divide by mitosis.

..... [1]

[Total: 17]