

Foundation Combined — only core Foundation content included.

Q1. Explain how biological sex is determined in humans.

[2 marks]

Q2. Use a genetic cross diagram to show the expected ratio of male to female offspring.

[3 marks]

Total: 5 marks

Q1 (2 marks)

Explain how biological sex is determined in humans.

- Females: XX sex chromosomes; males: XY sex chromosomes [1]
- Eggs always carry X; sperm carry either X or Y — sex of child depends on which sperm fertilises the egg [1]

Q2 (3 marks)

Use a genetic cross diagram to show the expected ratio of male to female offspring.

- Father XY: gametes X and Y; mother XX: gametes X and X [1]
- Cross: XX and XY (two female, two male outcomes) [1]
- 50% male : 50% female — 1:1 ratio [1]