

0 1 . 1

What is meant by:
a *homozygous* genotype

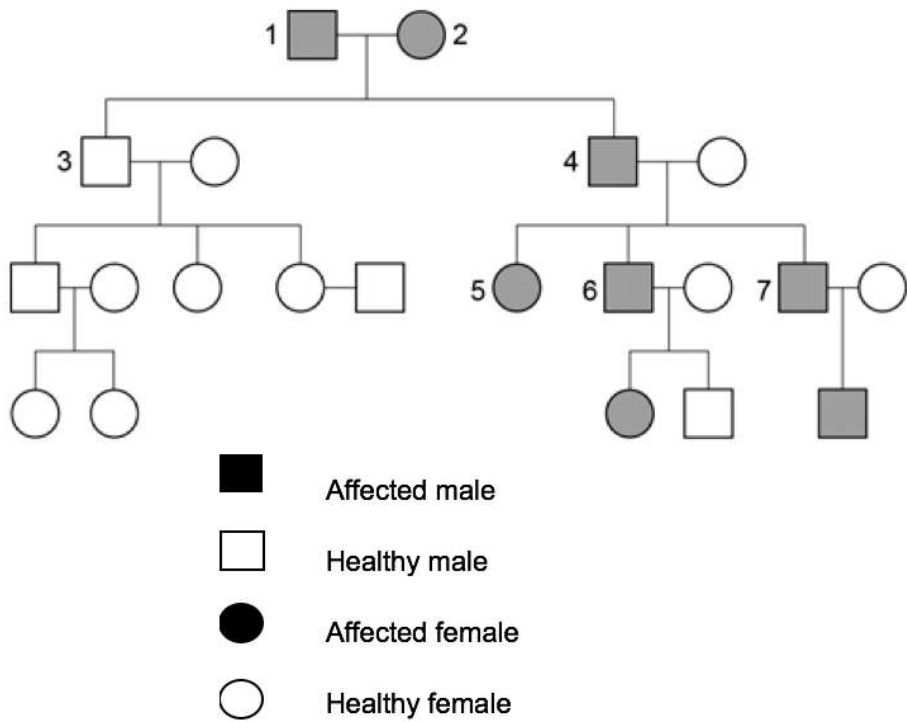
0 1 . 2

a *heterozygous* genotype

[1 mark]

[1 mark]

The diagram below shows a family tree of a family with an inherited genetic disorder.



0 1 . 3

Is the allele for the disorder dominant or recessive? Explain the reasons for your answer. You may use a genetic diagram to help you.

[4 marks]

| | | | |
|---|---|---|---|
| 0 | 1 | . | 4 |
|---|---|---|---|

Person 4 may have a different genotype to person 6. Explain why

[5 marks]

| | | | |
|---|---|---|---|
| 0 | 2 | . | 1 |
|---|---|---|---|

The chromosomes for determining the gender or sex of a person are labelled **X** and **Y**.

Show how the gender of a child is determined by the chromosomes inherited from the parents.

Use a diagram to help you.

[4 marks]

| | | | |
|---|---|---|---|
| 0 | 2 | . | 2 |
|---|---|---|---|

What are the chances of getting a baby boy?

[1 mark]

| | | | |
|---|---|---|---|
| 0 | 2 | . | 3 |
|---|---|---|---|

A couple have three boys. What are the chances of the next child being a boy?

Circle the correct response.

The same Higher Lower Depends on which egg is fertilised first

[1 mark]

