1 **a** Where in a cell are chromosomes found?

_____

b What is the name of the long molecule found in a chromosome?

_____

2 Where is genetic information found? Tick (✓) all that apply.

☐ in genes ☐ in chromosomes ☐ in DNA

☐ in animal cells ☐ in plant cells ☐ in gametes

3 Where are the instructions for ABO blood type found? Tick (✓) the best answer.

☐ in a red blood cell ☐ in the brain ☐ in a hospital ☐ in a gene

4 What is the name of the largest human chromosome?

_____

5 How many chromosomes would you expect to find in the following human cells? Circle the correct answers.

Cell	Total number of chromosomes									
liver cell	0	1	2	3	6	12	23	46	69	92
sperm cell	0	1	2	3	6	12	23	46	69	92
zygote	0	1	2	3	6	12	23	46	69	92

6 Draw lines to match the scientists with what they did to help discover the structure of DNA.

Rosalind Franklin	Helped build a double helix model of DNA in 1953.
James Watson	Spent years testing the double helix model of DNA.
Maurice Wilkins	Recognised the shape spiral molecules make on X-ray photos.
Francis Crick	Took photos of DNA using X-rays.

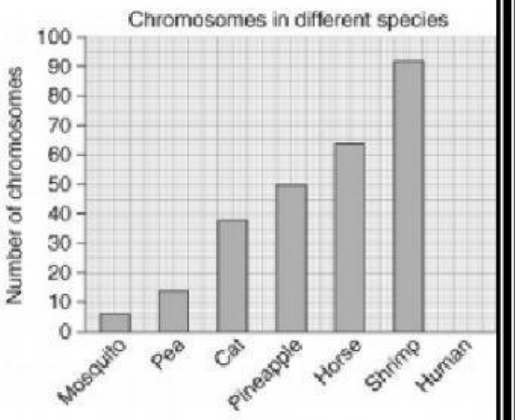
7 Where would you expect to find genes?

_____

1 **a** Every chromosome contains a long molecule. What is this molecule? _____

b In what part of a cell are chromosomes found? _____

2 Look at the bar chart.



a How many chromosomes does a cat body cell have?

_____

b Which species has 66 chromosomes in its body cells?

_____

c On the chart, fill in the missing bar for humans.

d Why is the total number of chromosomes in each species an even number?

_____

e Do you think there is a correlation (relationship) between the size of an organism and the number of chromosomes in its body cells?

_____

f Explain your answer to part **e**. _____

_____

_____

3 **a** Where are genes found? _____

b What do genes contain instructions for?

_____

4 James Watson, Francis Crick, Rosalind Franklin and Maurice Wilkins all helped to discover the structure of DNA.

a Fill in the names below, to show what the scientists did. Just write in their last names.

b Number the boxes to show the order in which these events occurred.

☐ _____ helped build a correct double-helix model of DNA

☐ _____ recognised the pattern on an X-ray photo.

☐ _____ showed an X-ray photo to Francis Crick.

☐ _____ told Watson and Crick their model was wrong.

☐ _____ took a very good X-ray photo of DNA.