

## Exercise 6

1.

Fatty acid	Number of double bonds between carbon atoms	Number of carbon atoms
butyric	0	4
stearic	0	18
palmitoleic	1	16
linoleic	2	18

Explain which of these fatty acids would have the lowest risk of causing CVD, if included in a diet in equal masses.

(2)

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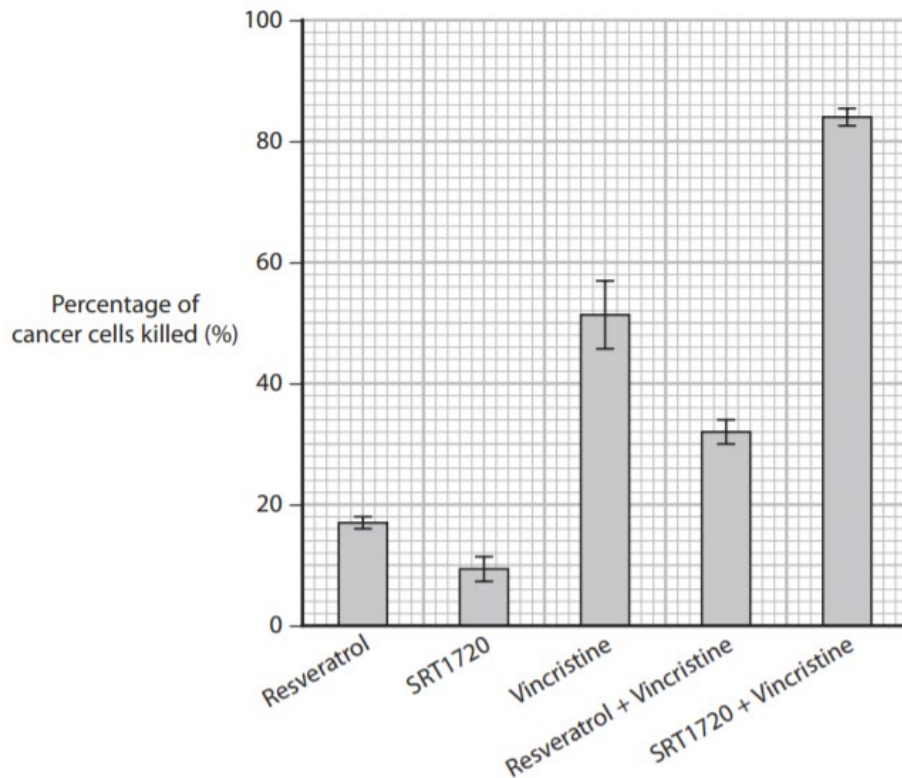
2.

(c) Ewing's sarcoma is a type of cancer.

Resveratrol, SRT1720 and Vincristine are drugs used to kill cancer cells.

An investigation was carried out to determine the most effective treatment for patients with Ewing's sarcoma.

The graph shows the results of this investigation.



(ii) Evaluate the effectiveness of the three drugs used in this investigation.

Use the information in the graph to support your answer.

(4)

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**3.**

(c) If the mineral ions are not absorbed, they are egested in the faeces.

The faeces of genetically modified (GM) farm animals contain less phosphate than the faeces of normal farm animals.

(i) Some people catch fish from rivers near farm land.

Discuss why these people might support the genetic modification of farm animals.

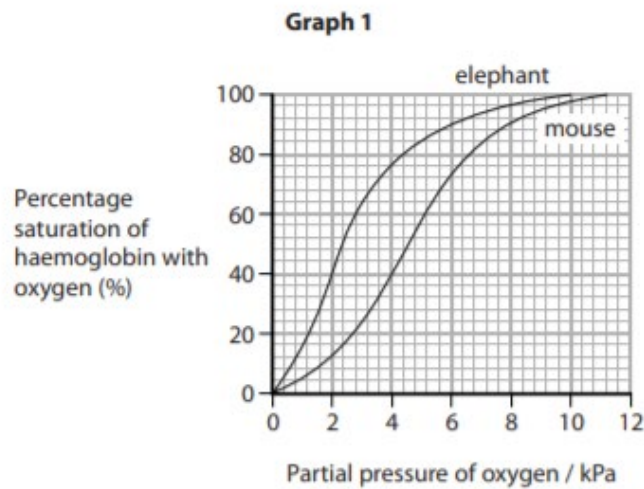
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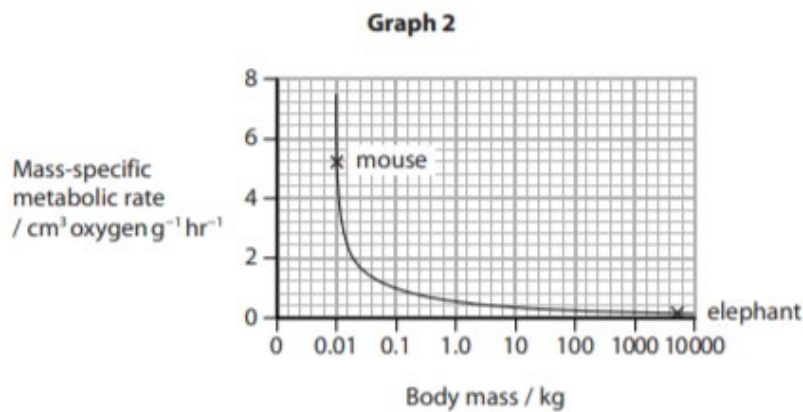
4.

\*(c) Graph 1 shows the oxygen dissociation curve of haemoglobin for a mouse and for an elephant.



Graph 2 shows the mass-specific metabolic rate for a mouse and for an elephant.

Mass-specific metabolic rate is a measure of how much oxygen is needed for chemical reactions per gram of body tissue.



Explain the difference in the oxygen dissociation curves of haemoglobin for a mouse and for an elephant.

Use the information in both graphs to support your answer.

(6)

### Mark Scheme: Indicative Content

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