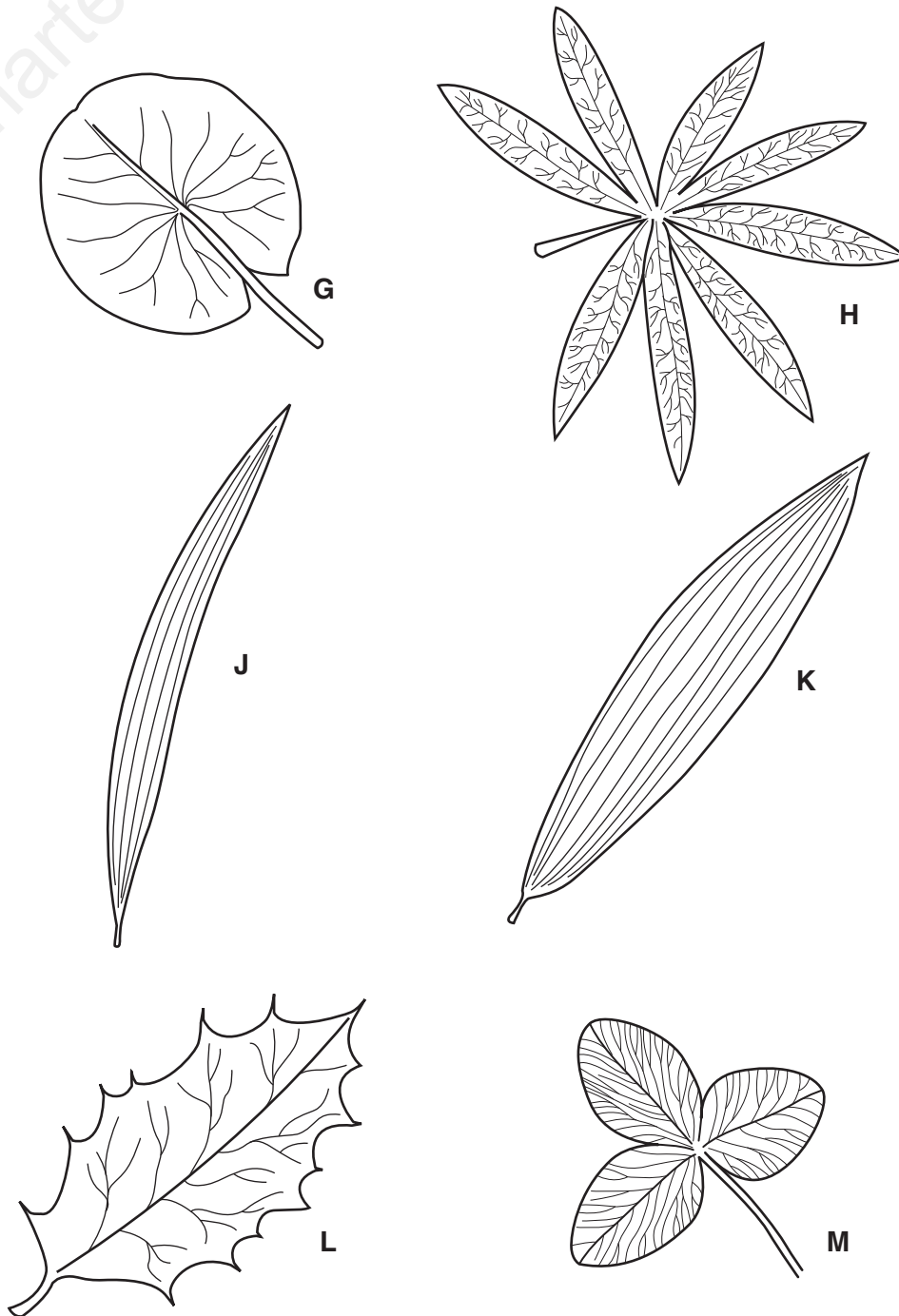


1 Fig. 7.1 shows six leaves.



not drawn to scale

Fig. 7.1

Use the key to identify the plants that these leaves came from.

Write the letter for each leaf in the key.

Key

	description	name of organism	letter
1 (a)	veins parallel	go to 2	
(b)	veins not parallel	go to 3	
2 (a)	leaf length more than six times leaf width at its widest point	<i>Plantago maritima</i>	
(b)	leaf length less than six times leaf width at its widest point	<i>Plantago lanceolata</i>	
3 (a)	leaf has thorns (spikes)	<i>Ilex aquifolium</i>	
(b)	leaf has no thorns (spikes)	go to 4	
4 (a)	leaf not divided into sections	<i>Nymphaea alba</i>	
(b)	leaf divided into sections	go to 5	
5 (a)	leaf divided into 3 sections	<i>Trifolium pratense</i>	
(b)	leaf divided into 8 sections	<i>Lupinus arboreus</i>	

[5]

[Total: 5]

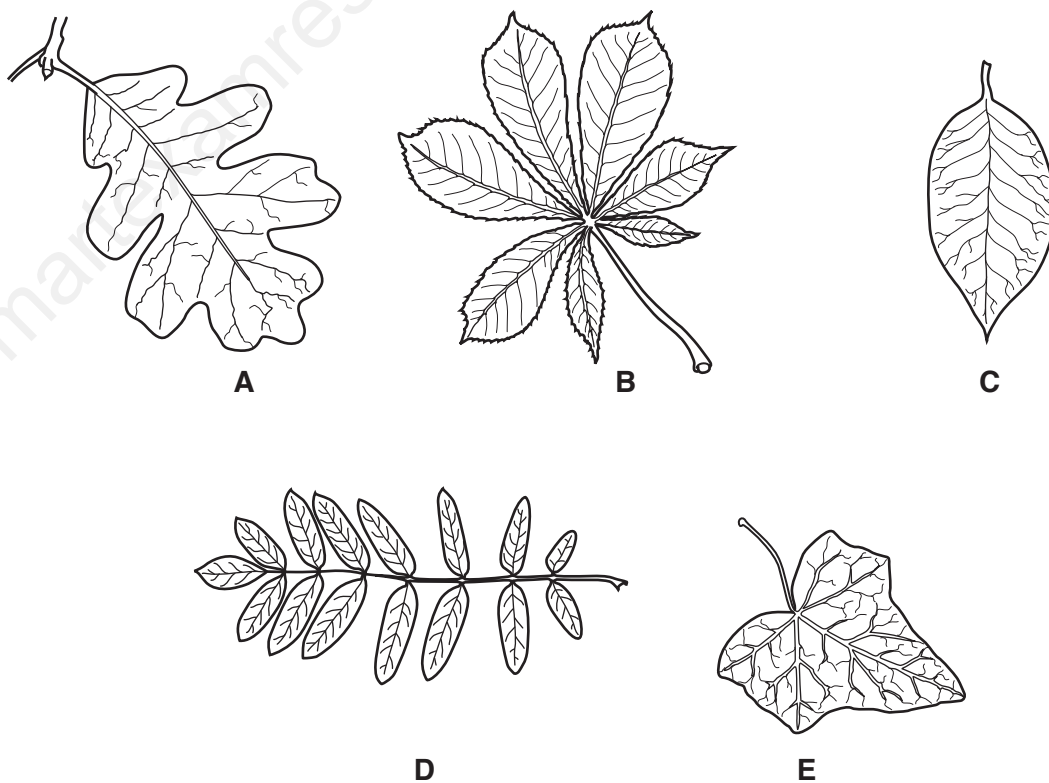
MARK SCHEME:

Description	Name	Letter
1		
2	<i>Plumbago maritima</i>	J
	<i>Plumbago lanceolata</i>	K
3	<i>Ilex aquifolium</i>	L
4	<i>Nymphaea alba</i>	G
5	<i>Trifolium pratense</i>	M
	<i>Lupinus arboreus</i>	H

.....

5 1 correct = 1 mark
 2 correct = 2 marks
 3 correct = 3 marks
 4 or 5 correct = 4 marks
 6 correct = 5 marks

2 Fig. 1.1 shows five whole leaves from different trees.



not to scale

Fig. 1.1

Use the key to identify the leaves in Fig. 1.1 and write the answers in Table 1.1.

Table 1.1

		key	name of tree	letter
1	(a)	leaf is a single leaf shape	go to 2	
	(b)	leaf is divided into several parts called leaflets	go to 4	
2	(a)	veins branch from a long middle vein	go to 3	
	(b)	veins branch from a single point at the stalk	<i>Hedera</i>	
3	(a)	leaf is oval and has a smooth edge	<i>Magnolia</i>	
	(b)	leaf is not oval and has a lobed edge	<i>Quercus</i>	
4	(a)	leaf has leaflets joined at one point on the stalk	<i>Aesculus</i>	
	(b)	leaf has leaflets joined at different points along the stalk	<i>Sorbus</i>	

[4]

[Total: 4]

MARK SCHEME:

<table border="1"><thead><tr><th>name of tree</th><th>letter</th></tr></thead><tbody><tr><td>go to 2</td><td></td></tr><tr><td>go to 4</td><td></td></tr><tr><td>go to 3</td><td></td></tr><tr><td><i>Hedera</i></td><td>E</td></tr><tr><td><i>Magnolia</i></td><td>C</td></tr><tr><td><i>Quercus</i></td><td>A</td></tr><tr><td><i>Aesculus</i></td><td>B</td></tr><tr><td><i>Sorbus</i></td><td>D</td></tr></tbody></table>	name of tree	letter	go to 2		go to 4		go to 3		<i>Hedera</i>	E	<i>Magnolia</i>	C	<i>Quercus</i>	A	<i>Aesculus</i>	B	<i>Sorbus</i>	D	4 1 correct = 1 mark 2 correct = 2 marks 3 or 4 correct = 3 marks 5 correct = 4 marks
name of tree	letter																		
go to 2																			
go to 4																			
go to 3																			
<i>Hedera</i>	E																		
<i>Magnolia</i>	C																		
<i>Quercus</i>	A																		
<i>Aesculus</i>	B																		
<i>Sorbus</i>	D																		

3

Fig. 1.1 shows whole leaves from five different trees.

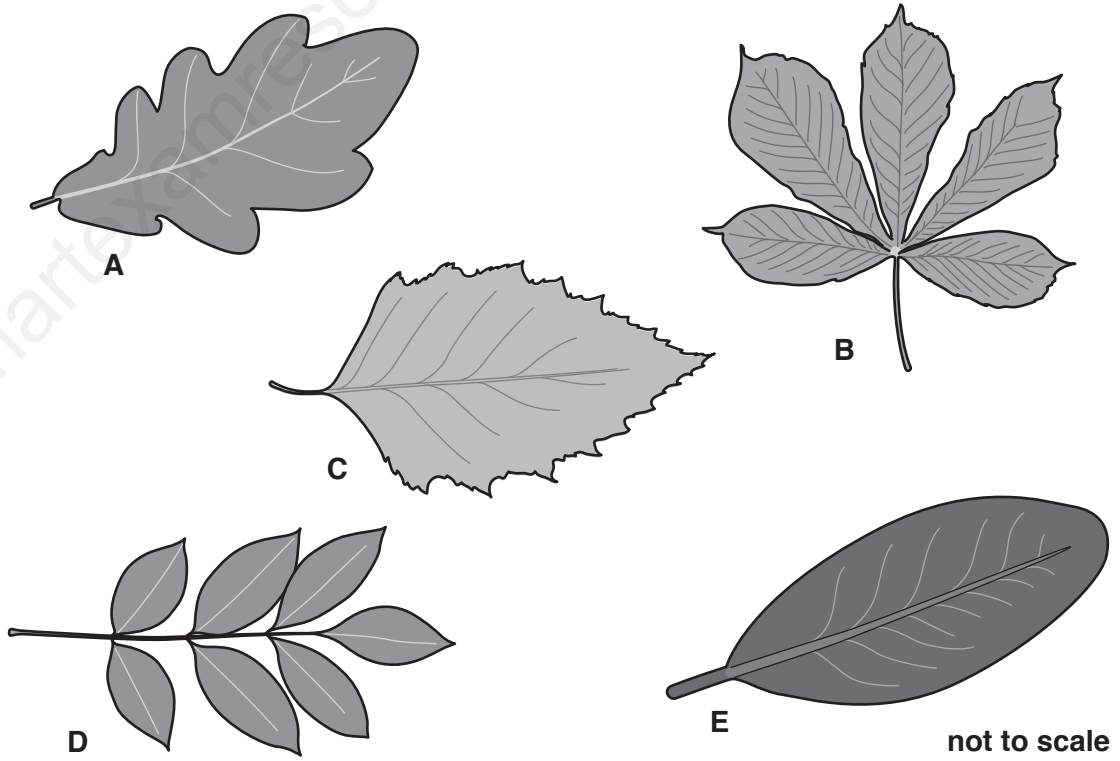


Fig. 1.1

4

Fig. 1.2 is a key which can be used to identify the five leaves shown in Fig. 1.1. The key shows the scientific names of the five trees that the leaves came from. In this key Box 4 is missing.

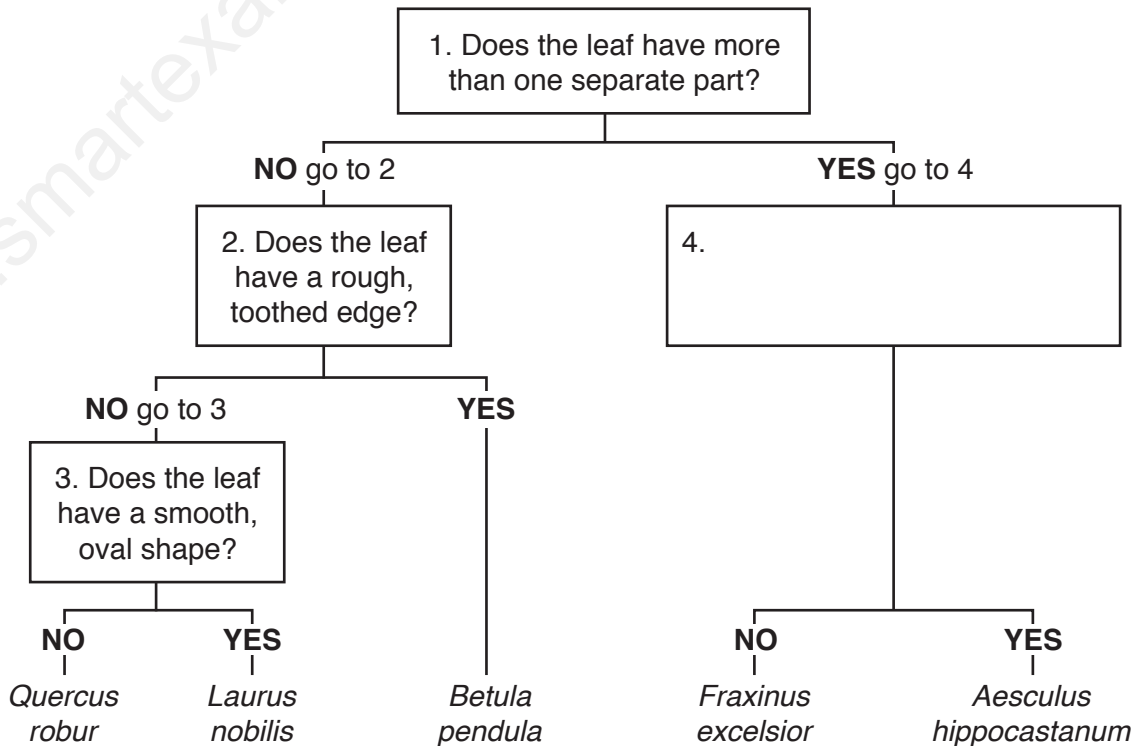


Fig. 1.2

(i) Use the key to identify the five leaves shown in Fig. 1.1.

The leaf labelled **B** has been identified for you.

Complete Table 1.1 by writing the correct letter next to the Latin name of each type of leaf.

Table 1.1

name of tree	letter
<i>Aesculus hippocastanum</i>	B
<i>Betula pendula</i>	
<i>Fraxinus excelsior</i>	
<i>Laurus nobilis</i>	
<i>Quercus robur</i>	

[3]

(ii) Suggest a suitable question which could be used to distinguish between the leaves of *Aesculus hippocastanum* and *Fraxinus excelsior*.

Write your answer in Box 4 on Fig. 1.2.

[1]

MARK SCHEME:

<i>Betula pendula</i> = C <i>Fraxinus excelsior</i> = D <i>Laurus nobilis</i> = E <i>Quercus robur</i> = A	...	3 All 4 correct = 3 2 or 3 correct = 2 1 correct = 1
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5 Fig. 1.1 shows the underground storage organs of five plants.

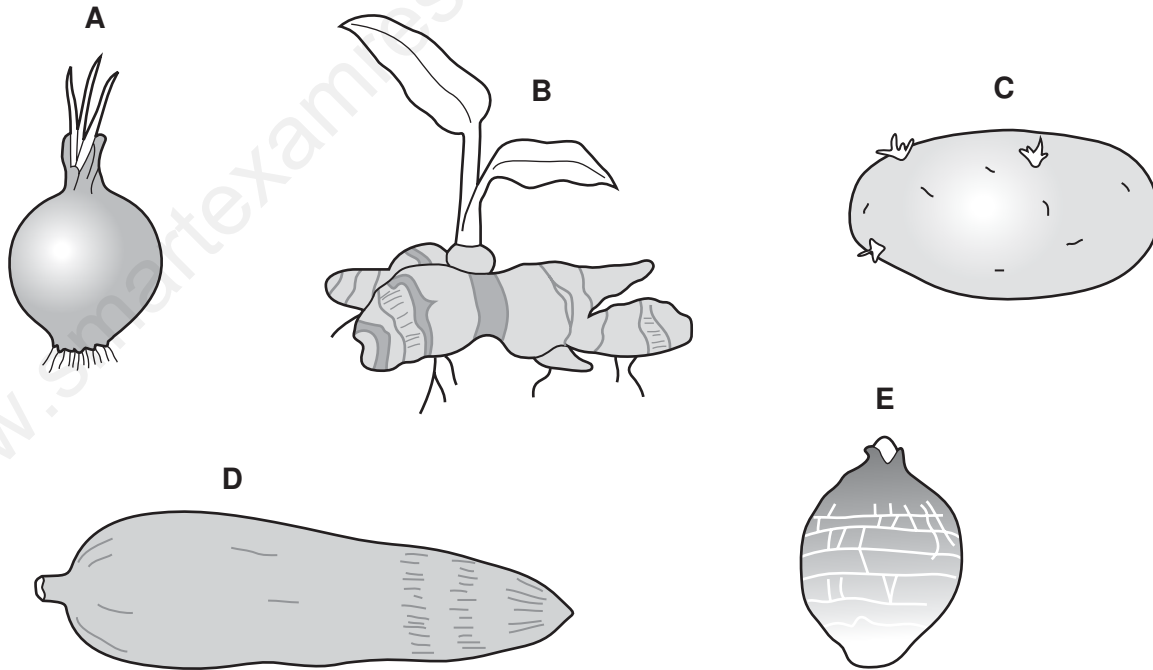


Fig. 1.1

Use the key to identify which storage organ, shown in Fig. 1.1, is produced by which plant.

Write the letter of each storage organ on the correct line in the key.

Key

	name of plant	letter of storage organ
1 (a) Approximately round	go to 2	
(b) Longer than it is wide	go to 3	
2 (a) Has a ring of roots at the base	<i>Allium</i>
(b) No ring of roots	<i>Colocasia</i>
3 (a) Has shoots or leaves	go to 4	
(b) No shoots or leaves	<i>Cassava</i>
4 (a) Branched	<i>Zingiber</i>
(b) Not branched	<i>Solanum</i>

[4]

[Total: 10]

MARK SCHEME:

plant	storage organ
Allium;	A;
Colocasia	E;
Cassava;	D;
Zingiber;	B;
Solanum;	C;

Max [4]

6 Fig. 1.1 shows five invertebrates that can harm humans.

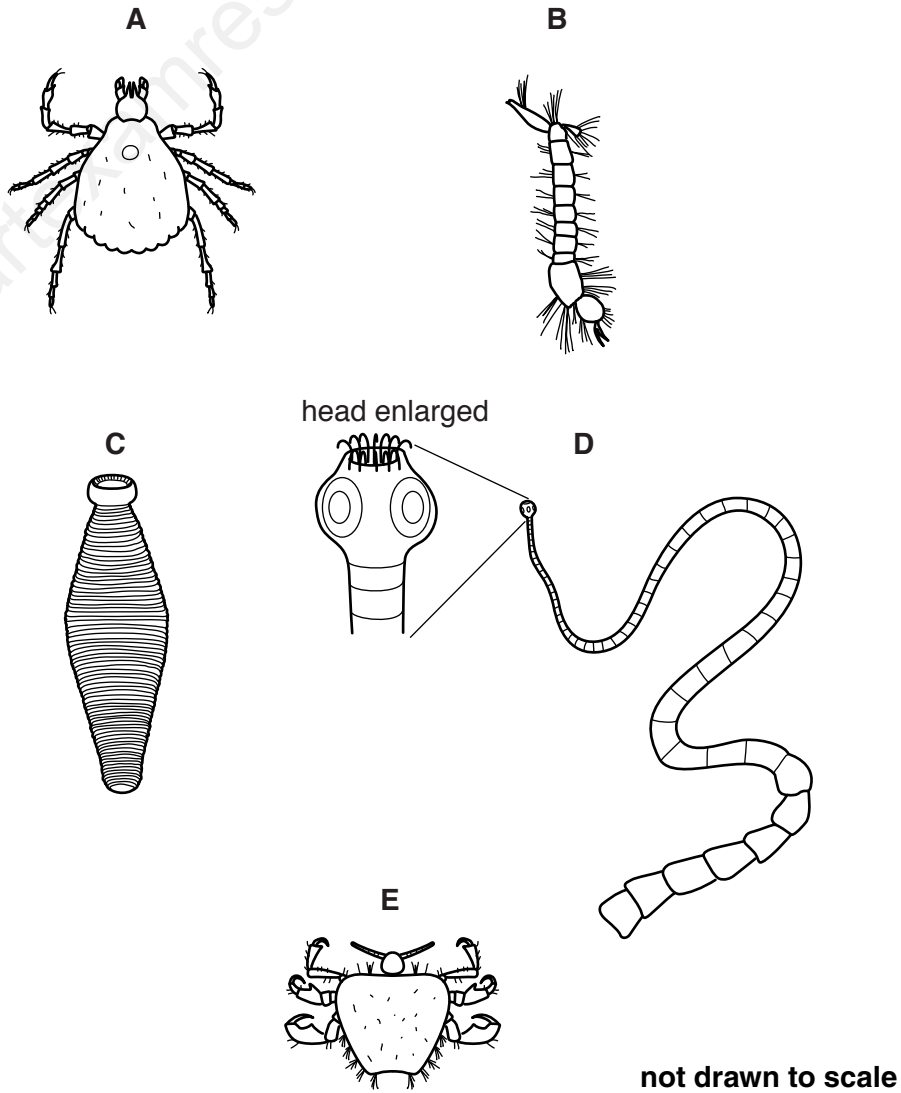


Fig. 1.1

Use the key to identify the invertebrates shown in Fig. 1.1.

Write the letter for each organism in the key.

Key

description		name of organism	letter
1	(a) body divided into visible segments	go to 3	
	(b) body not divided into visible segments	go to 2	
2	(a) four pairs of legs present	<i>Amblyomma americanum</i>	
	(b) three pairs of legs present	<i>Pthirus pubis</i>	
3	(a) bristles present on body	<i>Aedes aegypti</i>	
	(b) no bristles present on body	go to 4	
4	(a) hooks on head	<i>Taenia solium</i>	
	(b) no hooks on head	<i>Hirudo medicinalis</i>	

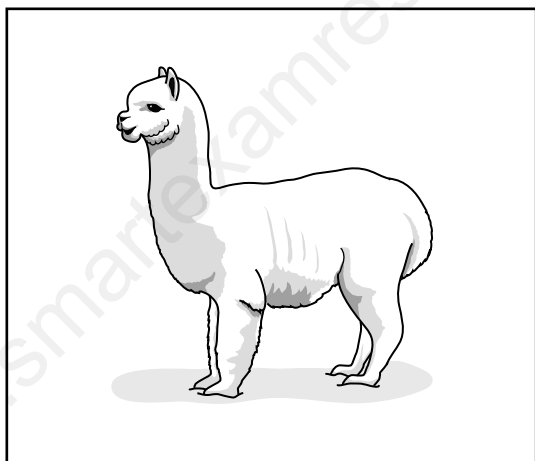
[4]

[Total: 4]

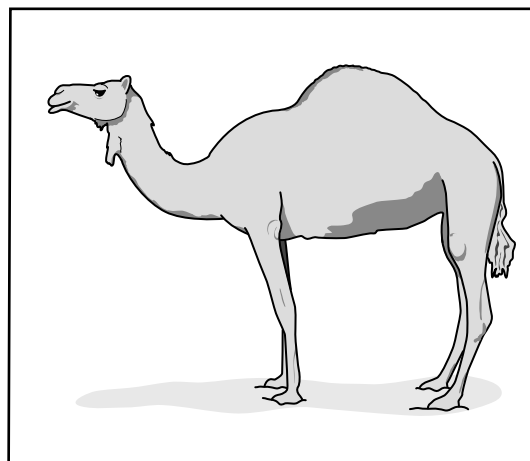
MARK SCHEME:

	A; E; B; D; C;	max 4	5 correct = 4 marks 3 or 4 correct = 3 marks 2 correct = 2 marks 1 correct = 1 mark
		[Total: 4]	

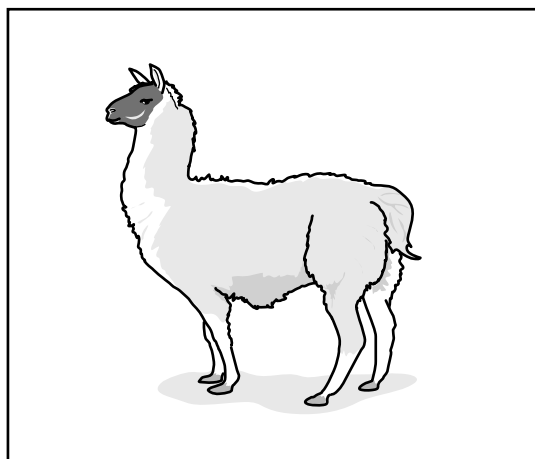
7 Fig. 1.1 shows five different mammals.



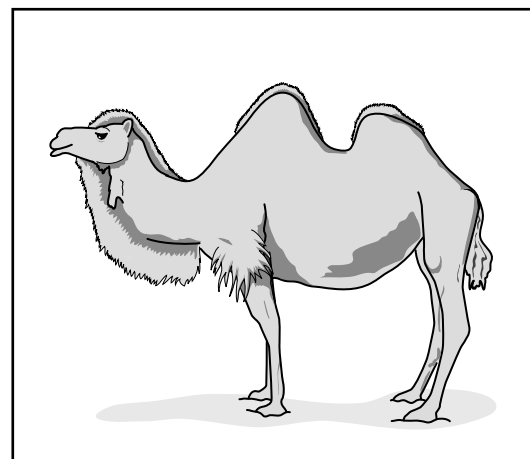
A



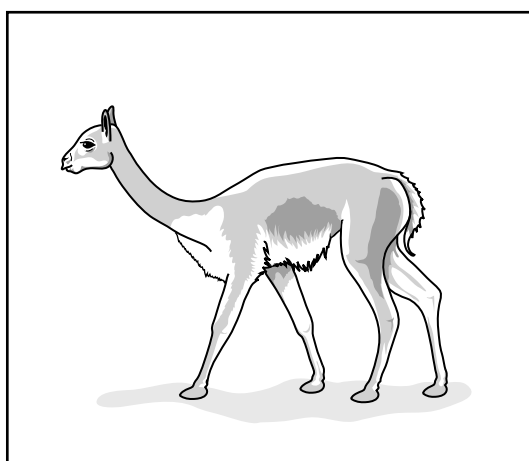
B



C



D



E

Fig. 1.1

Use the key to identify the mammals shown in Fig. 1.1.

Write the letter of each species (**A** to **E**) in the correct box beside the key.

Key

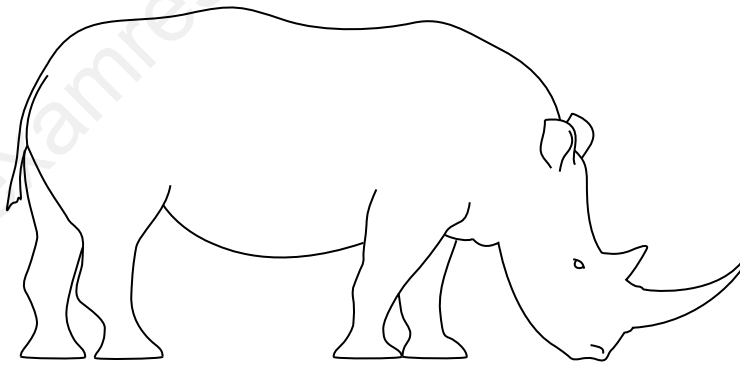
		name of mammal	letter
1	(a) has a humped back	go to 2	
	(b) back is level with no hump	go to 3	
2	(a) has one hump on its back	<i>Camelus dromedarius</i>	
	(b) has two humps on its back	<i>Camelus ferus</i>	
3	(a) has black fur on its face	<i>Lama glama</i>	
	(b) fur on face is not black	go to 4	
4	(a) neck and legs long and thin	<i>Vicugna vicugna</i>	
	(b) neck and legs short and thick	<i>Vicugna pacos</i>	

[Total: 4]

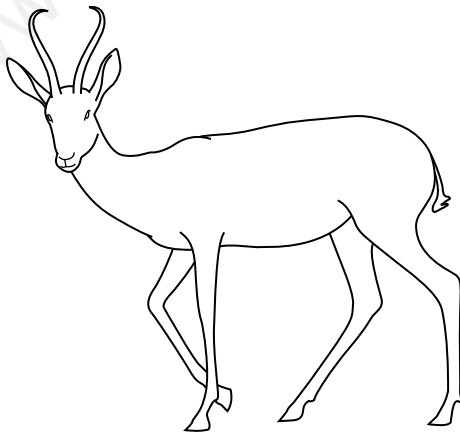
MARK SCHEME:

B (<i>Camelus dromedaries</i>) D (<i>Camelus ferus</i>) C (<i>Lama glama</i>) E (<i>Vicugna vicugna</i>) A (<i>Vicugna pacos</i>)	max 4	1 correct = 1 mark 2 correct = 2 marks 3 correct = 3 marks 4 or 5 correct = 4 marks
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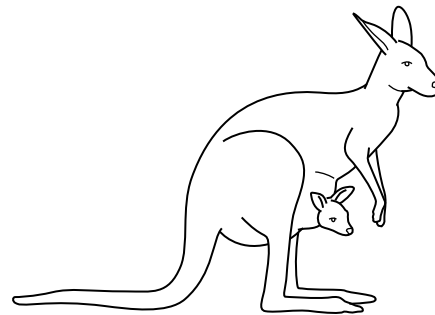
8 Fig. 1.1 shows five different mammals.



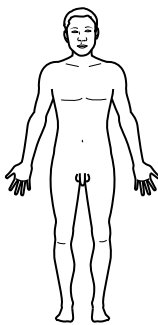
A



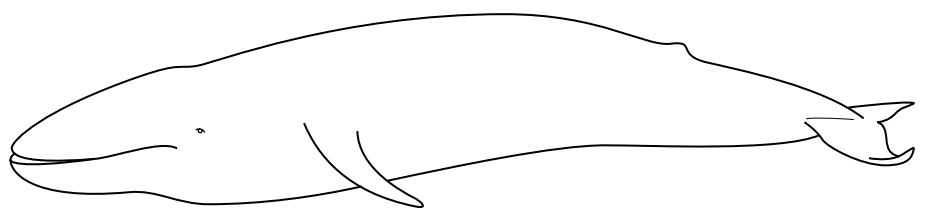
B



C



D



E

not drawn to scale

Fig. 1.1

Use the key to identify the mammals shown in Fig. 1.1.

Write the letter of each species (**A** to **E**) in the correct box beside the key.

key

		letter
1	(a) has visible external ears	go to 2
	(b) does not have visible external ears	<i>Eschrichtius robustus</i>
2	(a) stands on four legs	go to 3
	(b) stands on two legs	go to 4
3	(a) has two horns between its ears	<i>Antidorcas marsupialis</i>
	(b) has two horns in front of its ears	<i>Diceros bicornis</i>
4	(a) has ears placed on top of head	<i>Macropus rufus</i>
	(b) has ears placed at the side of head	<i>Homo sapiens</i>

[4]

MARK SCHEME:

[Total: 4]

<p>E <i>E. robustus</i> ; B <i>A. marsupialis</i> ; A <i>D. bicornis</i> ; C <i>M. rufus</i> ; D <i>H. sapiens</i> ;</p>	<p>max [4]</p>	<p>4 or 5 correct = 4 marks 3 correct = 3 marks 2 correct = 2 marks 1 correct = 1 mark</p>
	<p>[Total: 4]</p>	