

# MONOCOTS AND DICOTS

1 Fig 3.1 shows one complete leaf from two different species of plant, **P** and **Q**.

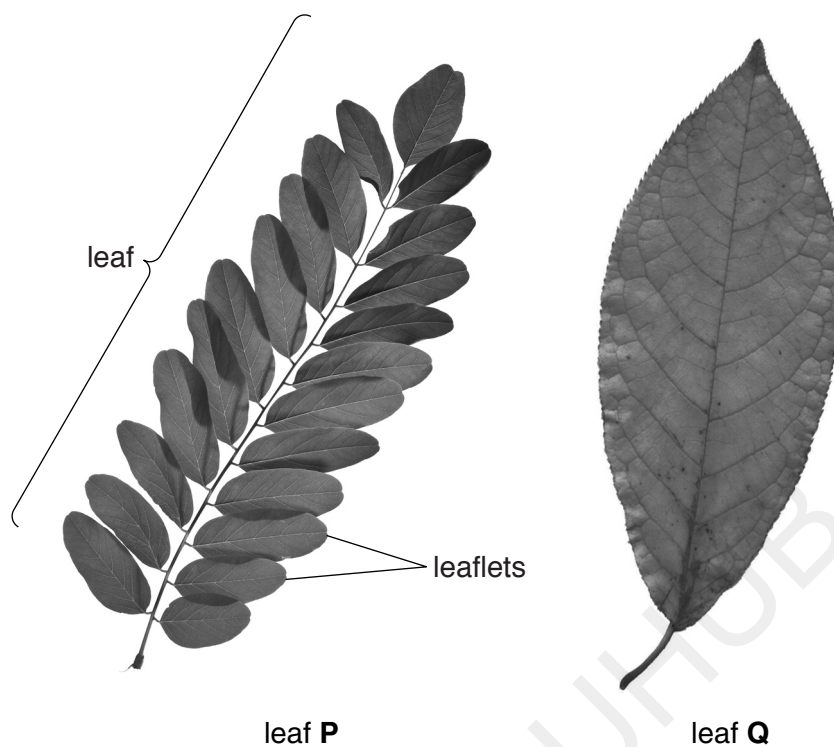


Fig. 3.1

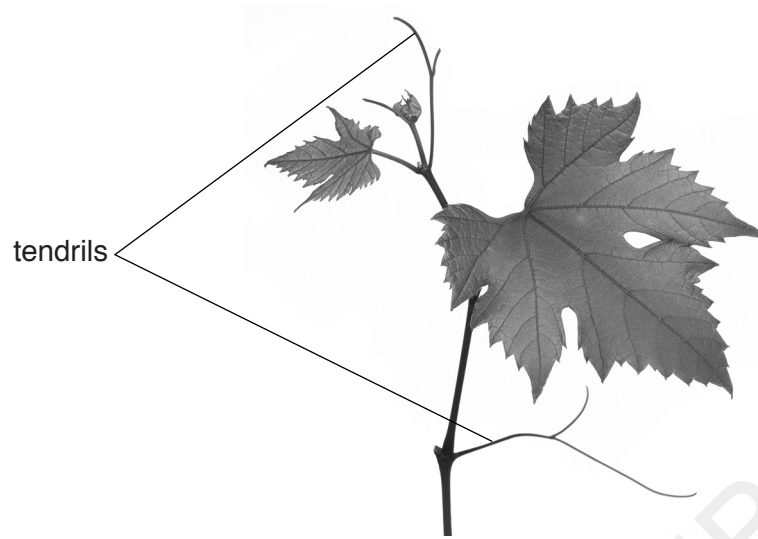
(a) (i) State **two** features which are visible in **both** leaf **P** and leaf **Q**.

- 1 .....
- 2 ..... [2]

(ii) State **two** ways, other than size, in which leaf **P** differs from leaf **Q**.

- 1 .....
- 2 ..... [2]

(b) Fig. 3.2 shows part of a climbing plant.



**Fig. 3.2**

- (i) In the space below make a large drawing of the part of the climbing plant shown in Fig. 3.2.

[4]

(ii) Suggest **one** advantage and **one** disadvantage to the plant of having tendrils, as shown in Fig. 3.2.

advantage .....

.....

disadvantage .....

.....

[2]

(c) Fig. 3.3 shows a leaf of a monocotyledonous plant.



**Fig. 3.3**

The leaves shown in Fig 3.1 and Fig. 3.2 are all from eudicotyledonous (dicotyledonous) plants.

Complete Table 3.1 by stating **two** ways in which the leaves shown in Fig. 3.1 and Fig. 3.2 differ from the leaf of a monocotyledonous plant, shown in Fig. 3.3.

**Table 3.1.**

feature	eudicotyledonous	monocotyledonous

[3]

**MARKING SCHEME**

(a) (i)	lamina / blade ; midrib ; veins ; petiole / stalk ;	max [2]										
(ii)	<i>any 2 from:</i>  (P) is divided into leaflets ; (P) has smooth edge ; (P) does not have pointed tip ;	[2]	<b>A ora</b> if explicitly stated in terms of Q. <b>A</b> edge of Q is toothed / irregular <b>ignore</b> surface area									
(b) (i)	drawing of outline uses single clear unbroken lines with no shading anywhere ;  drawing occupies at least half of the space provided ;  detail of large leaf with clear midrib and four veins radiating from same point and some branching veins ;  detail of both forked tendrils ;	[4]										
(ii)	<i>advantage:</i> grip / attach / climb / support / AW ;  <i>disadvantage :</i> less leaf area / less photosynthesis / AW ;	[2]										
(c)	<table border="1" data-bbox="268 936 831 1151"> <thead> <tr> <th data-bbox="268 936 435 981">features</th> <th data-bbox="435 936 627 981">eudicotyledonous</th> <th data-bbox="627 936 831 981">monocotyledonous</th> </tr> </thead> <tbody> <tr> <td data-bbox="268 981 435 1077">veins / (named) vascular (tissue)</td> <td data-bbox="435 981 627 1077">network / branching / AW</td> <td data-bbox="627 981 831 1077">parallel / AW ;</td> </tr> <tr> <td data-bbox="268 1077 435 1151">shape / size ;</td> <td data-bbox="435 1077 627 1151">broad / wide / AW</td> <td data-bbox="627 1077 831 1151">long / thin / elongated / AW ;</td> </tr> </tbody> </table>	features	eudicotyledonous	monocotyledonous	veins / (named) vascular (tissue)	network / branching / AW	parallel / AW ;	shape / size ;	broad / wide / AW	long / thin / elongated / AW ;	[3]	
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		<b>[Total: 13]</b>										