

Adaptation, Interdependence and Competition

Total mark - 13

Q1.

The growth of daisy plants on a lawn is affected by biotic factors and by abiotic factors.

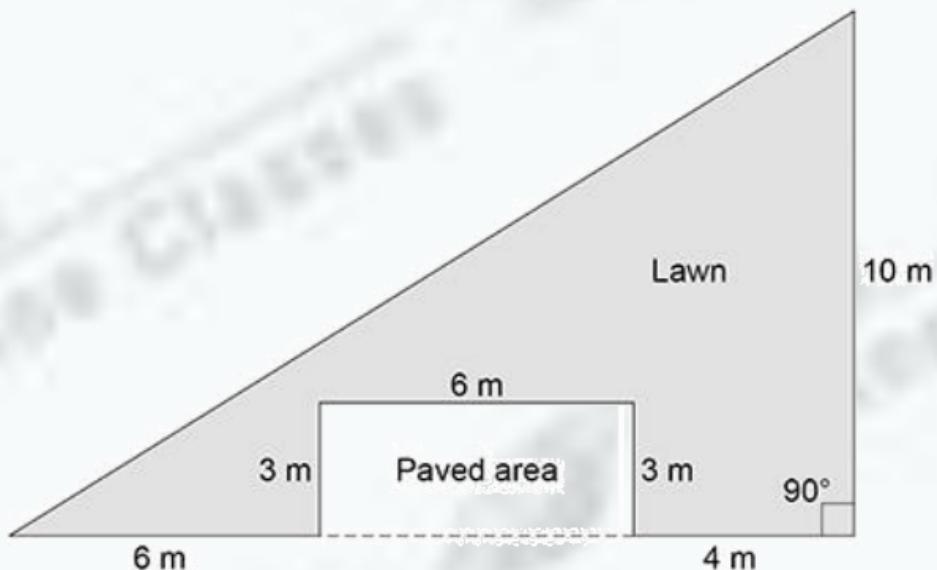
- (a) The table below shows six factors.

Tick (**✓**) **one** box in each row to show whether the factor is biotic or abiotic.

Factor	Biotic	Abiotic
Nitrates in the soil		
Rabbits eating the plants		
Shading by a building		
Soil pH		
Temperature		
Trampling by people		

(3)

The figure below shows a plan of a garden.



A student estimates the number of daisy plants growing on the lawn.

The student places a quadrat at 10 different positions on the lawn.

The quadrat measures $50\text{ cm} \times 50\text{ cm}$.

The student counts the number of daisy plants in each quadrat.

- (b) How should the student decide where to place the quadrat?

Give the reason for your answer.

(2)

- (c) The mean number of daisy plants in each quadrat is 6.

Calculate the number of daisy plants on the lawn.

Give your answer to 3 significant figures.

Number of daisy plants on the lawn = _____

(6)

- (d) Using the mean from this investigation to calculate the number of daisy plants on the lawn may **not** be accurate.

Give **two** reasons why.

1 _____

2 _____

(2)