

Biology  
PAPER 1  
Foundation Tier

Friday 10 May 2024 – Morning

Time: 1 hour 45 minutes

Diagram Booklet

THIS DIAGRAM BOOKLET MUST BE RETURNED WITH THE QUESTION PAPER AT THE END OF THE EXAMINATION.

In the boxes below, write your name, centre number and candidate number.

Surname					
Other names					
Centre Number					
Candidate Number					

## INSTRUCTIONS

There may be spare copies of some diagrams in case you need them.

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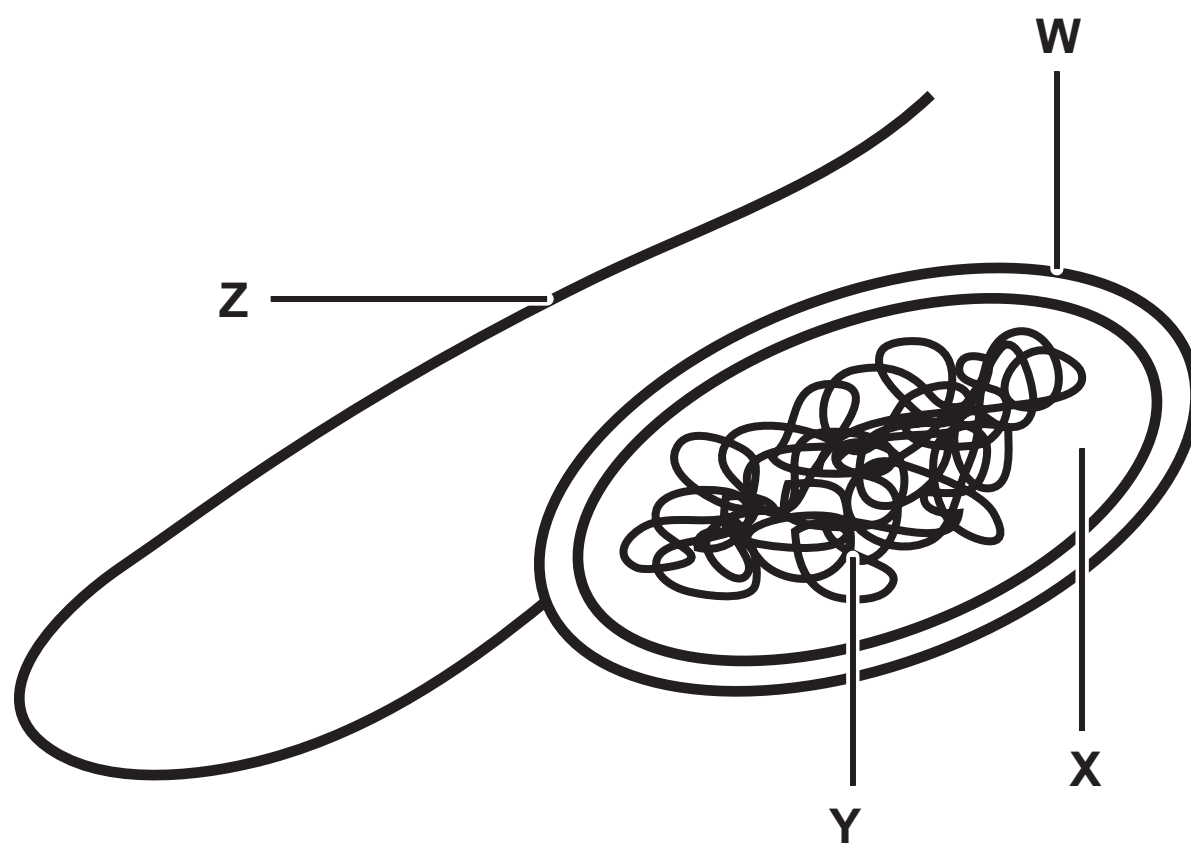
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## Question 1(a)

FIGURE 1





Question 1(b)

body defence

hydrochloric acid ●

skin ●

function

● moves pathogens away from the lungs

● makes antibodies

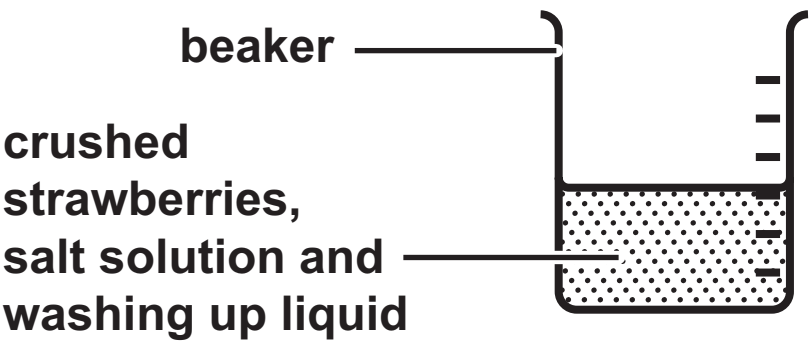
● destroys pathogens in the stomach

● makes antigens

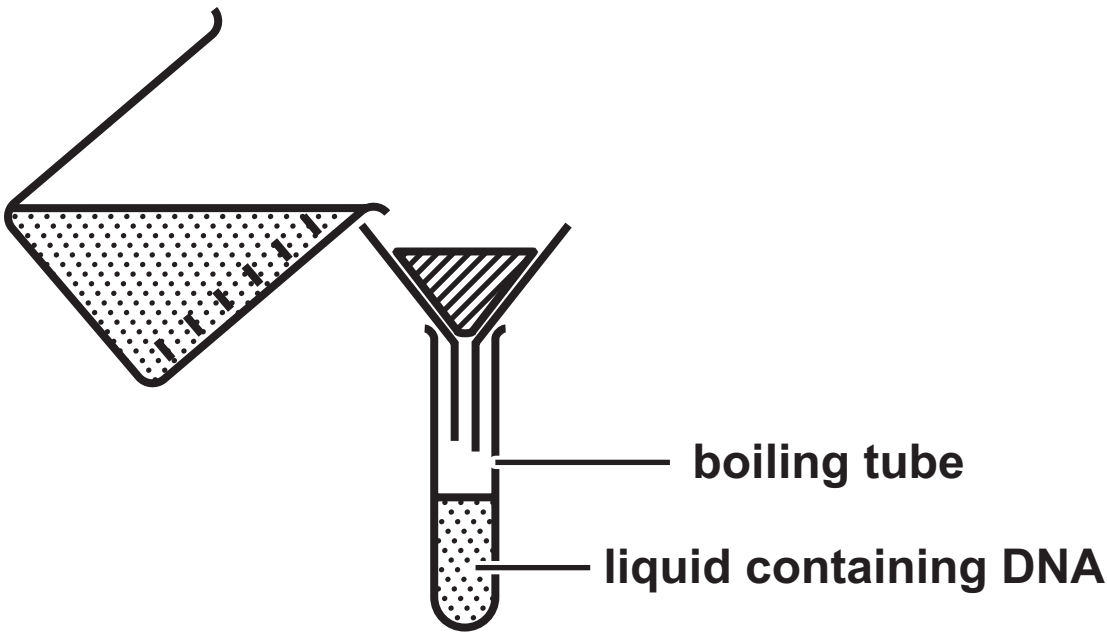
● stops pathogens entering the body

FIGURE 2

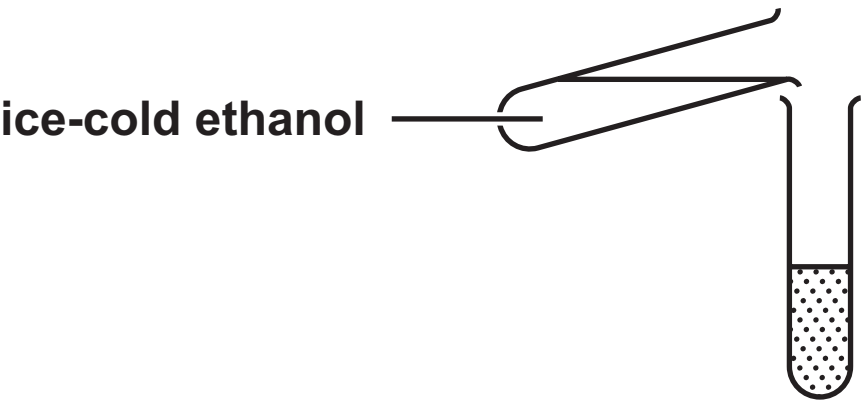
STAGE 1



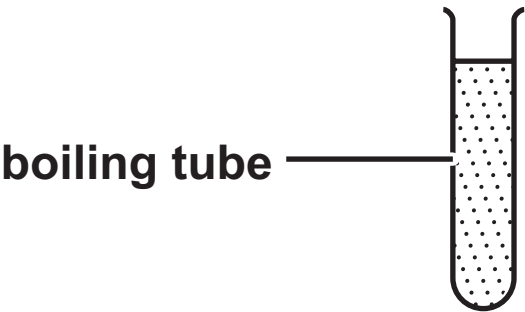
STAGE 2



STAGE 3



STAGE 4



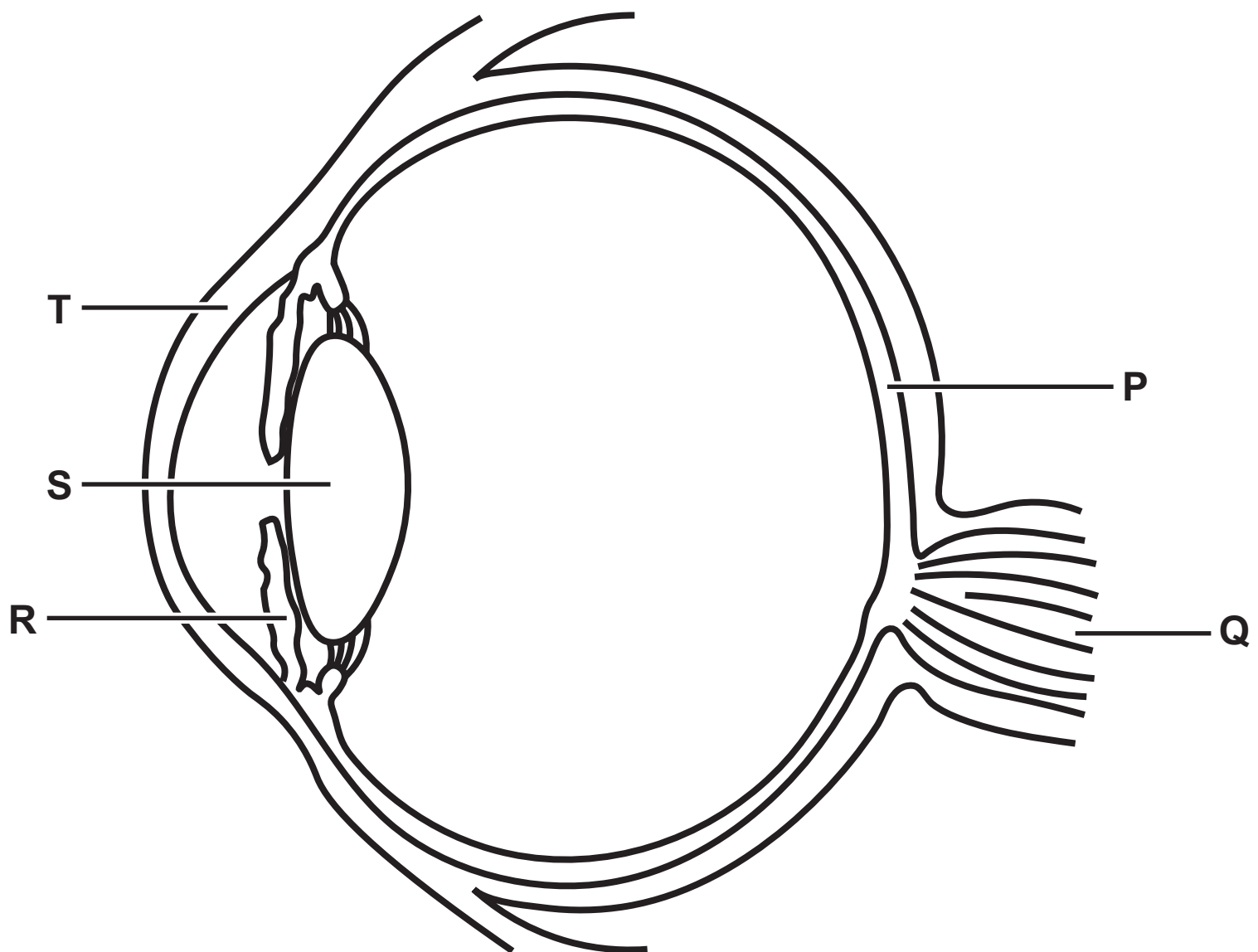
Question 2(b)

FIGURE 3

strawberry	mass of DNA in ng
1	11·8
2	6·5
3	5·9
4	1·4

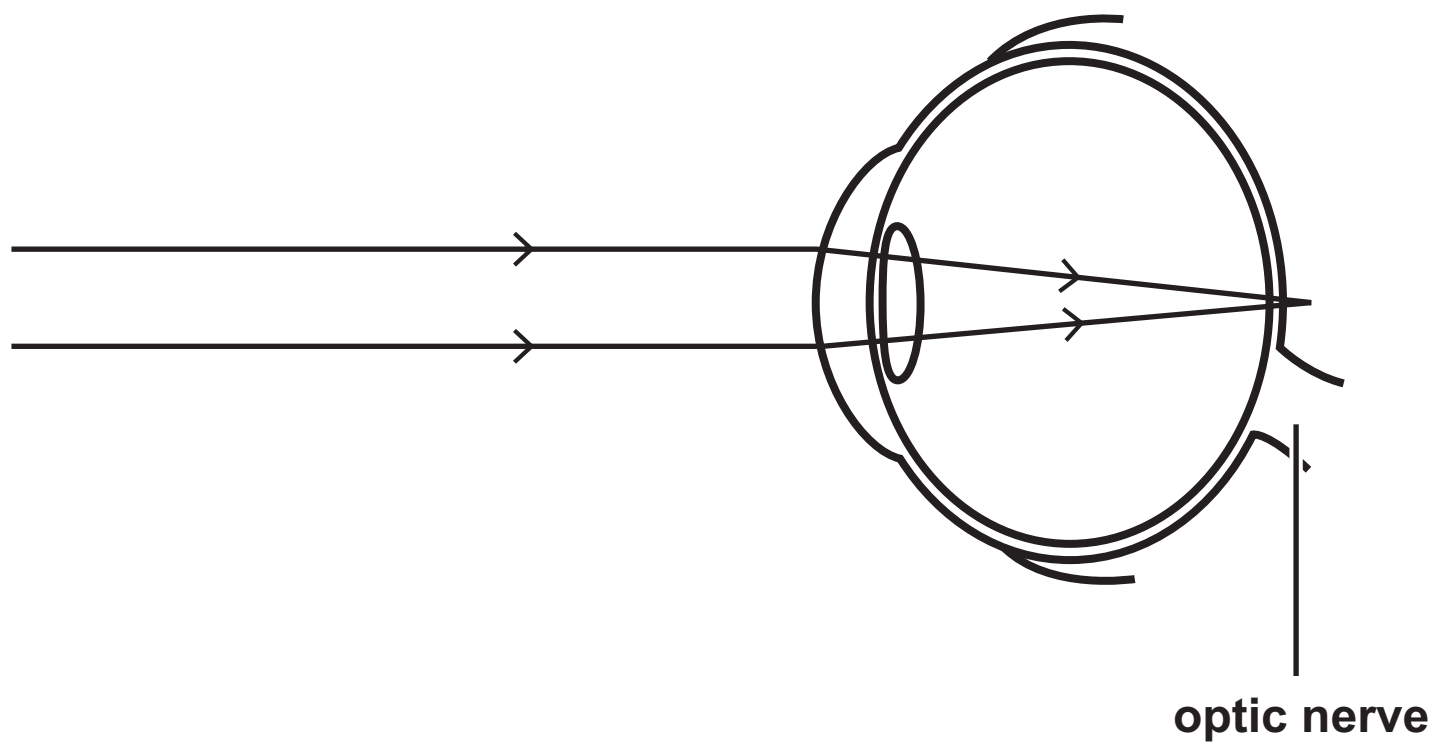
## Question 3(a)

FIGURE 4





## Question 3(b)

FIGURE 5



Question 4

FIGURE 6

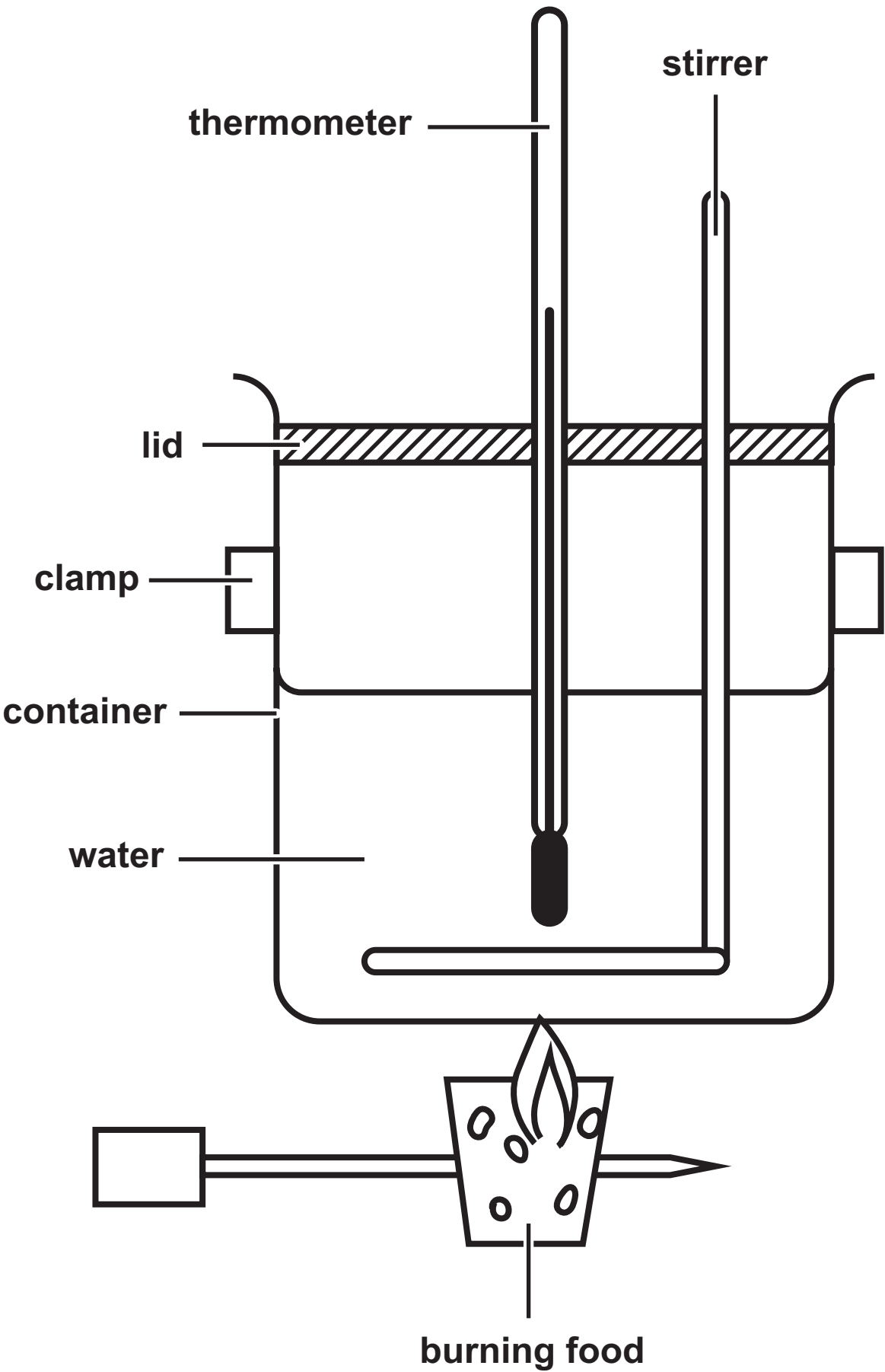
information	red junglefowl	domesticated chicken
photograph		
mass of adult in kg	0.75 to 1.2	2.5 to 3.0
number of eggs laid per year	10 to 15	250 to 300

Question 4(c)

type of cell produced	type of cell division	number of daughter cells produced
body cell	mitosis	
gamete		

Question 5

FIGURE 7





Question 5(b)

FIGURE 8

temperature change in °C	mass of water in g
30	50

Question 5(b)(ii)

FIGURE 9

temperature change in °C	mass of water in g	energy content in J
64	25	6 720

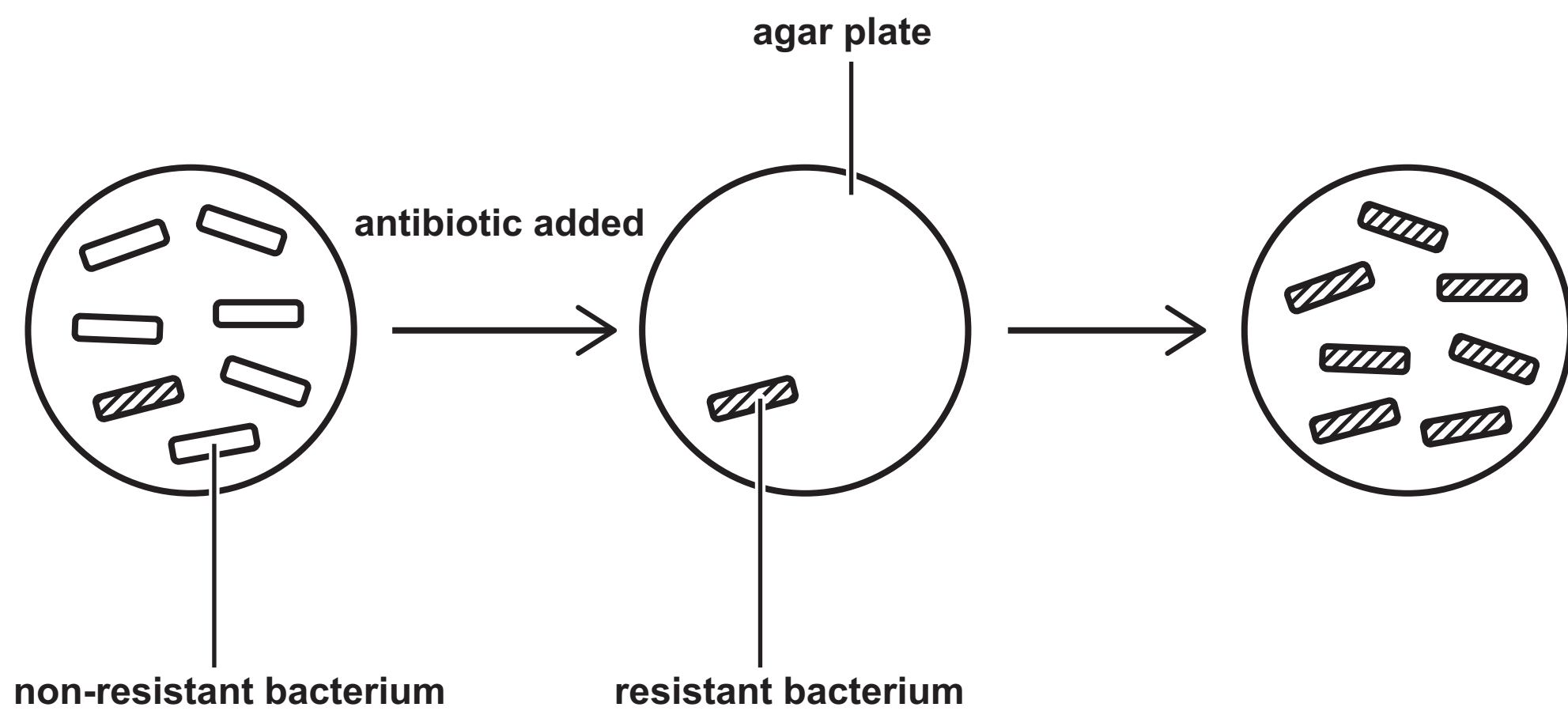
Question 5(c)

FIGURE 10

food	carbohydrate in g	fat in g	energy in kJ
100 g of apple	14·0	0·2	220
100 g of avocado	9·0	15·0	669

## Question 6(b)

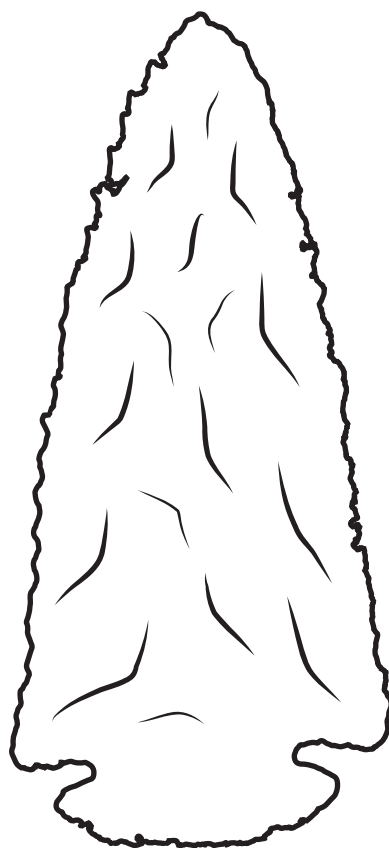
FIGURE 11



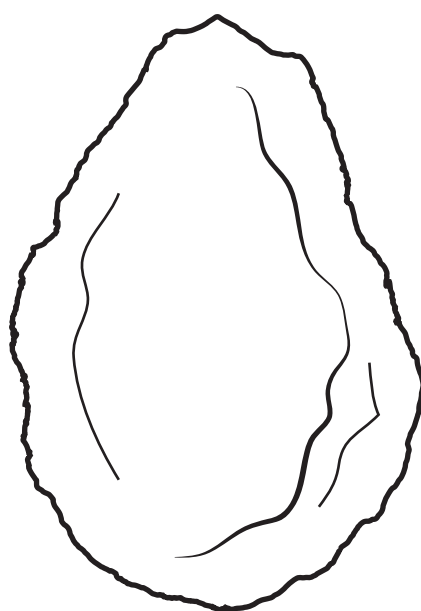
## Question 6(d)

**FIGURE 12**

**tool A**  
**approximately**  
**4 000 years old**

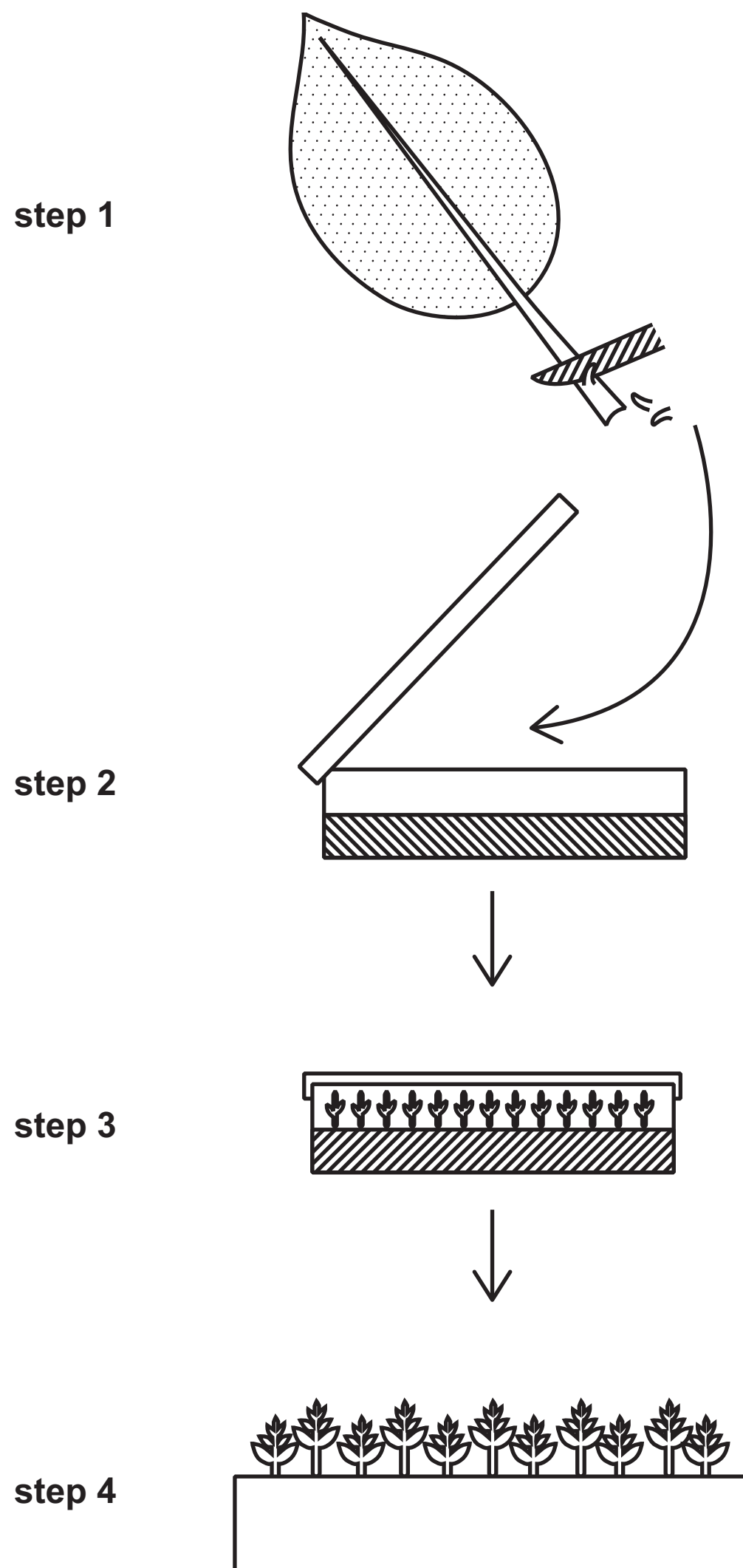


**tool B**  
**approximately**  
**100 000 years old**



## Question 7(b)

FIGURE 13



**Step 1: Cells are taken from a rare plant.**

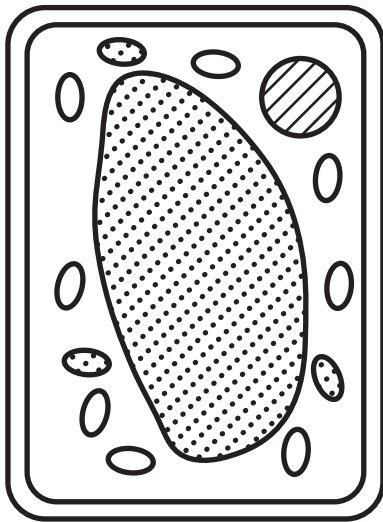
**Step 2: The cells are placed on sterile growth medium.**

**Step 3: The cells develop into small plantlets with roots and stems.**

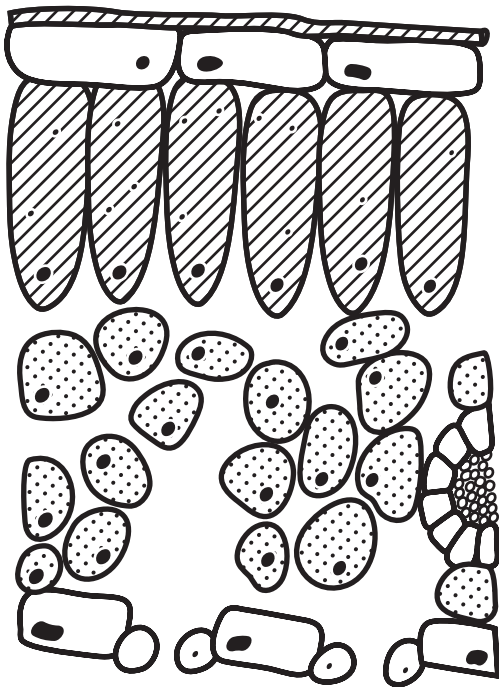
**Step 4: The plantlets are grown in compost.**

FIGURE 14

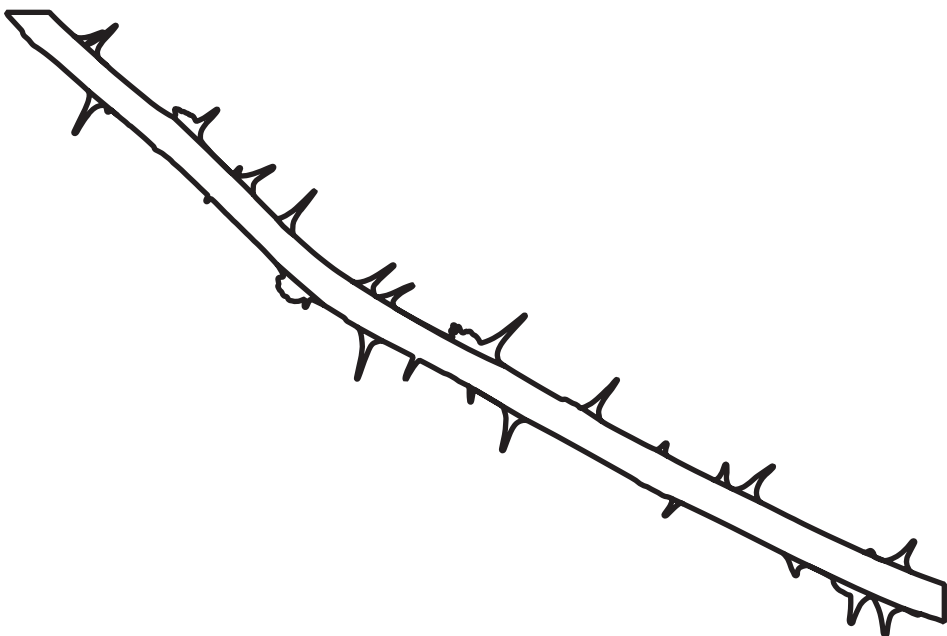
plant cell



section through a plant leaf

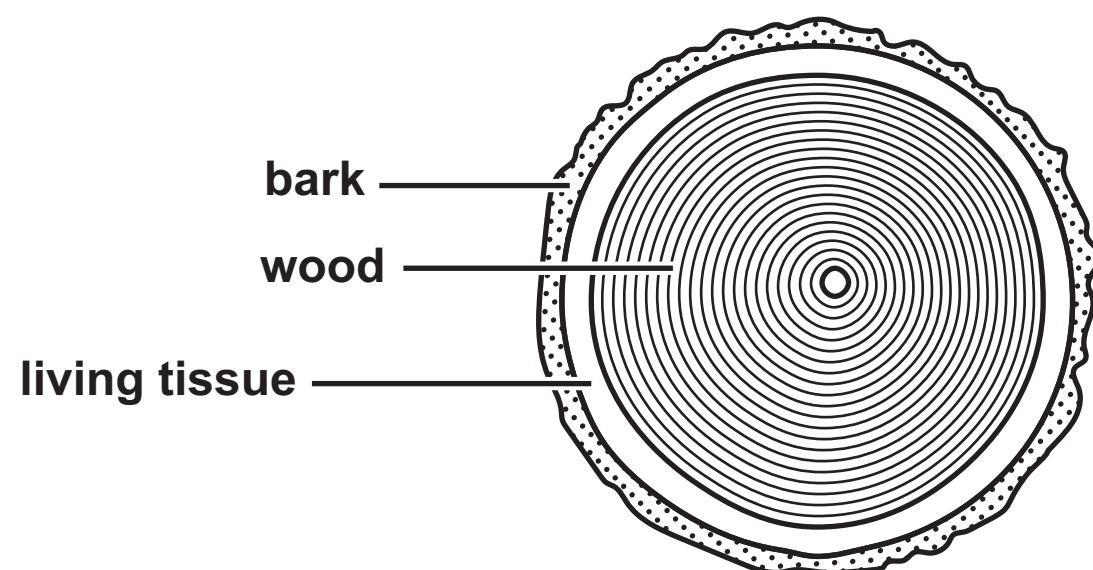


plant stem



Question 7(c) FIGURE 14 continued.

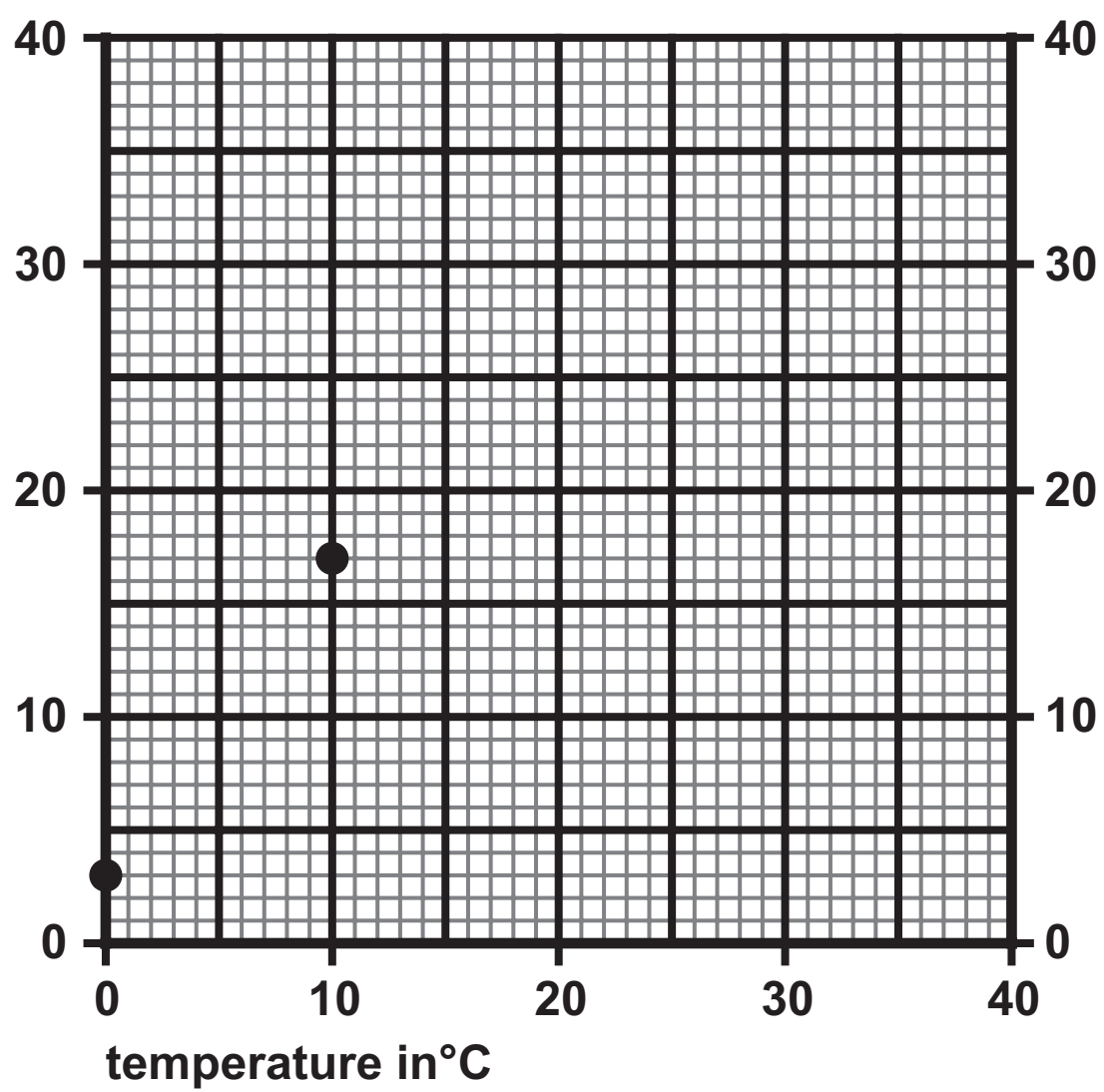
section through a woody stem





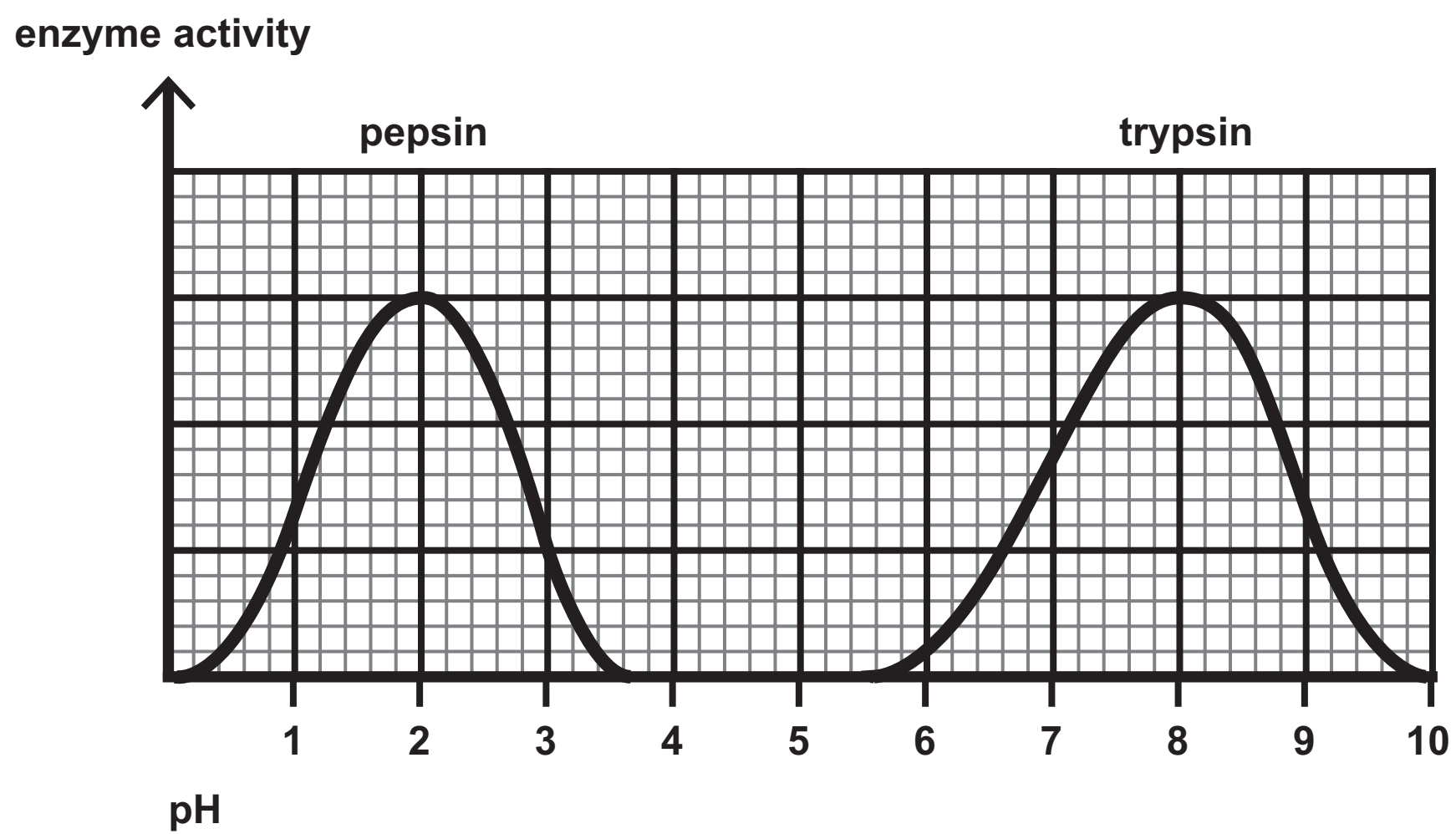
## Question 8(a)

rate of reaction in mg per minute



## Question 8(b)

FIGURE 16



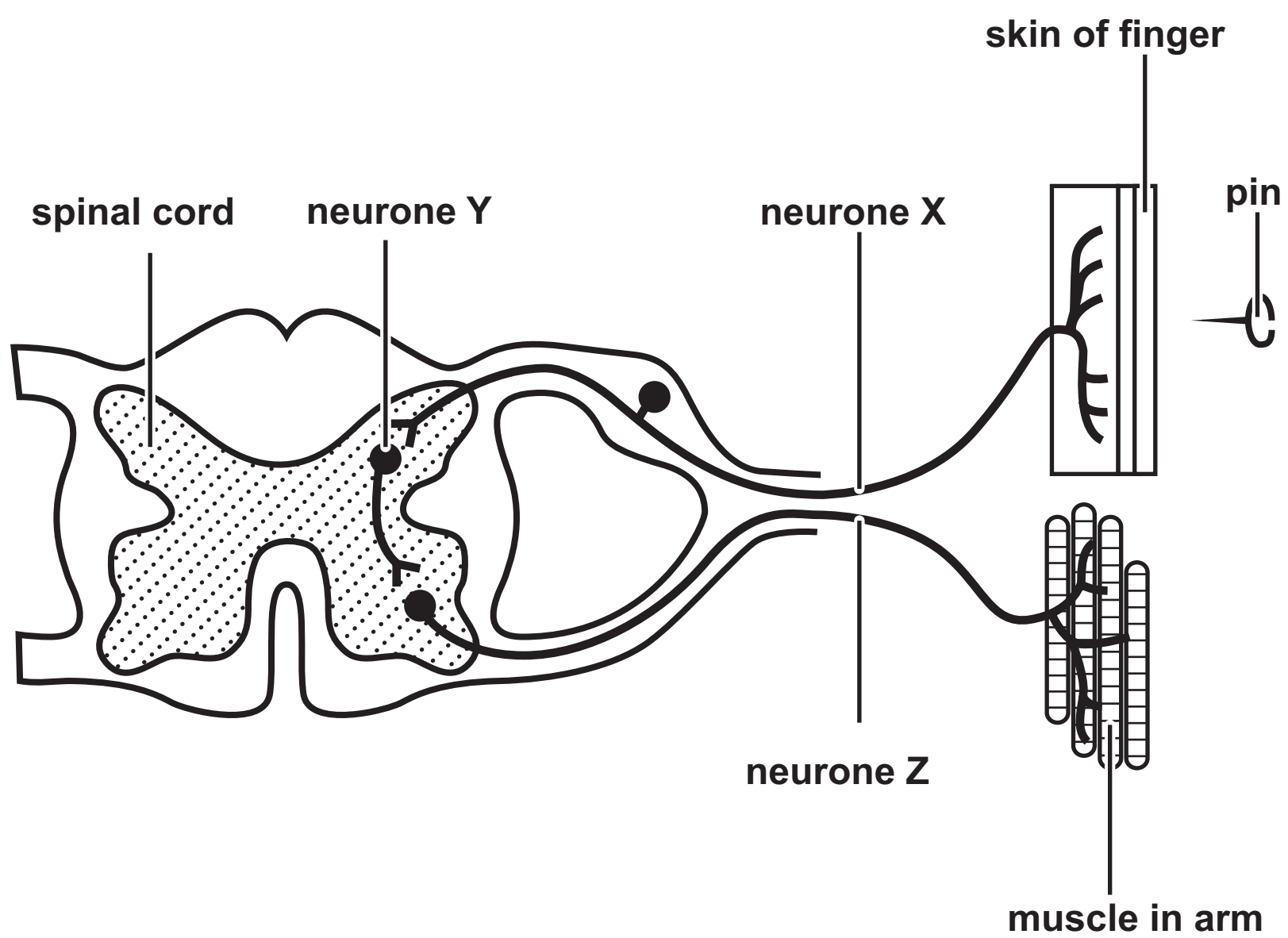
Question 9(b)

FIGURE 17

year	number of measles cases reported
1985	97 408
1995	7 447
2005	2 089
2015	1 193

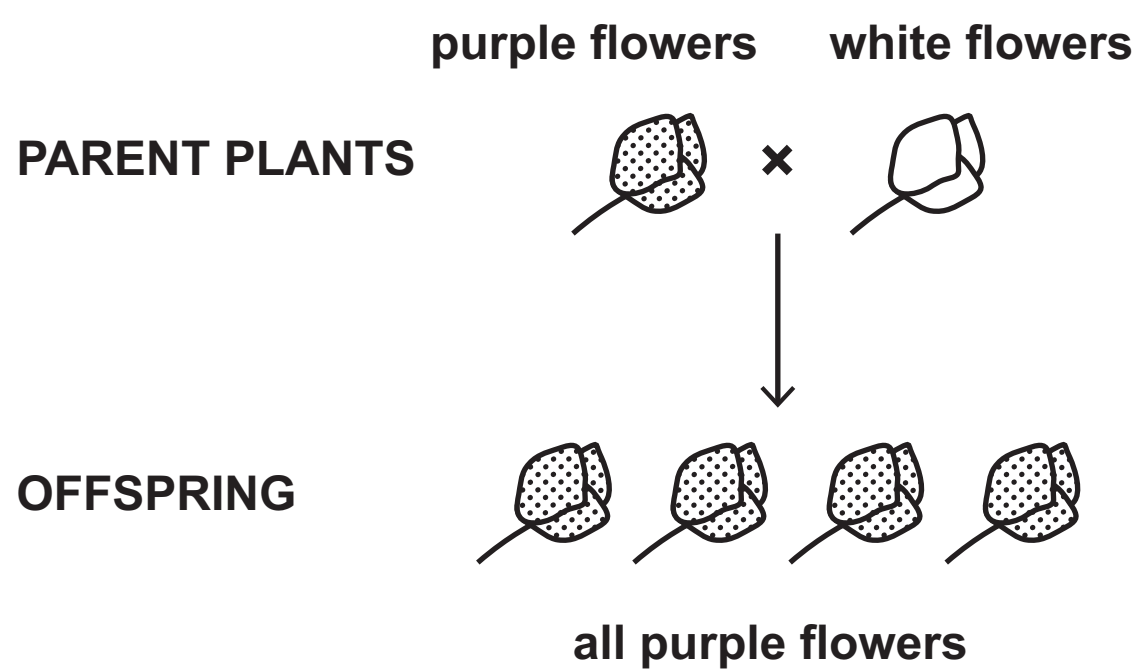
## Question 9(d)(ii)

FIGURE 18



## Question 10(a)

FIGURE 19



Question 10(a)(iii)

		white flowers	
purple flowers	A		
	a		

Question 1(b)

body defence	function
	● moves pathogens away from the lungs
hydrochloric acid ●	● makes antibodies
	● destroys pathogens in the stomach
skin ●	● makes antigens
	● stops pathogens entering the body

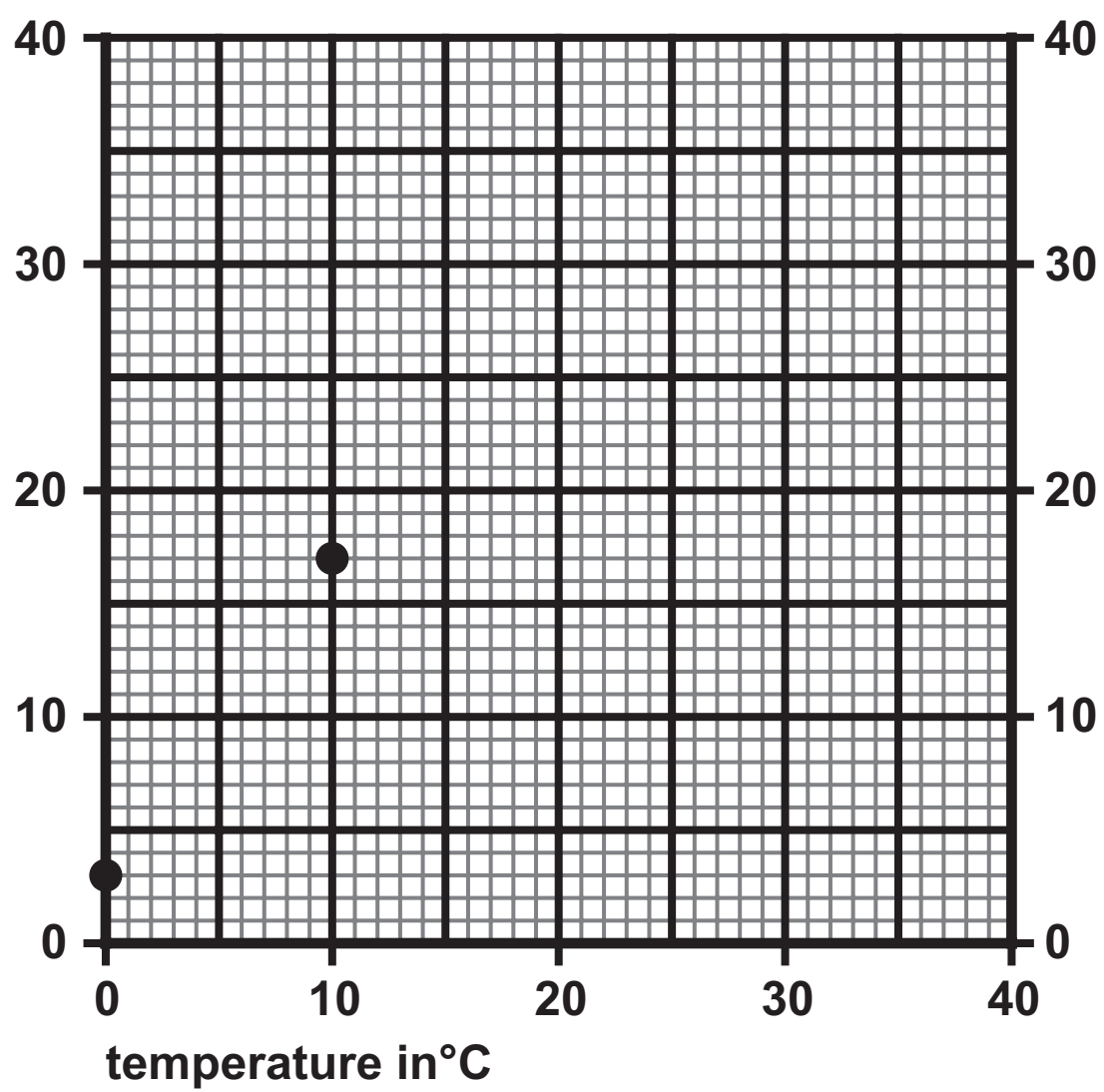
Question 4(c)

type of cell produced	type of cell division	number of daughter cells produced
body cell	mitosis	
gamete		



## Question 8(a)

rate of reaction in mg per minute



Question 10(a)(iii)

		white flowers	
purple flowers	A		
	a		

**Question 4**

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(Source: © Tsekhmister/Shutterstock)

**Question 6(d)**

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**Question 7(c)**

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