

6 Before a new drug can become available for use it has to pass a contemporary drug testing protocol. This includes three-phased testing.

(a) A drug may fail at any of the three phases.

Place a cross (☒) in the box next to the phase at which the drug would have failed.

(2)

(i) The drug did **not** improve the condition it was designed to treat in humans.

**A** Phase 1

**B** Phase 2

**C** Phase 3

(ii) The effect of the drug was different in humans from its effect in animals.

**A** Phase 1

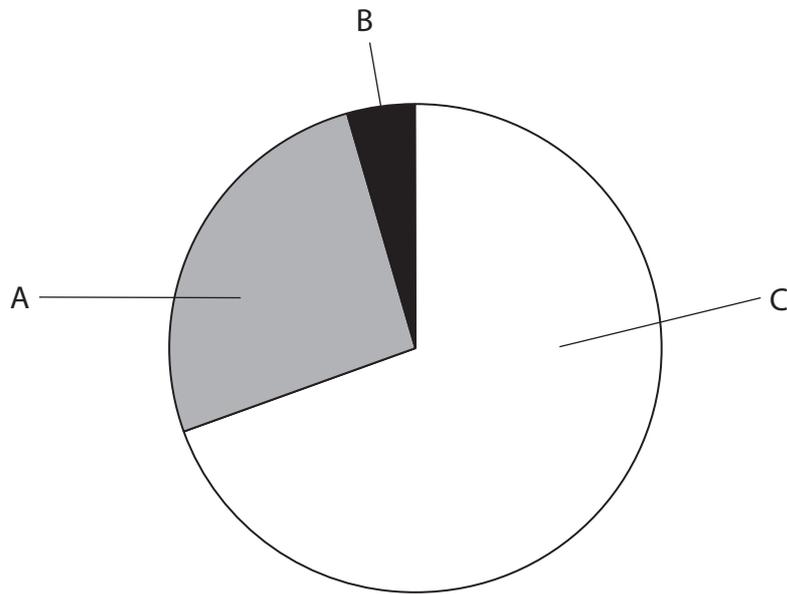
**B** Phase 2

**C** Phase 3



(b) The number of people tested is different in each phase.

The pie chart below shows the number of people tested in each phase of a drug trial.



Suggest which of the letters A, B or C, represents phase 3.  
Give a reason for your answer.

(2)

Letter .....

Reason .....

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(c) The table below shows the mean percentage improvement of a condition in humans, when given one of three different treatments.

Treatment	Percentage improvement of a condition (%)	
	Range	Mean
Placebo	18 – 22	20
Drug P	45 – 51	49
Drug Q	41 – 51	46

Both drugs P and Q passed the three-phased testing protocol. However, only drug P was made available for use.

Using the information in the table, suggest reasons why **only** drug P was made available.

(4)

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(d) The table below gives three statements about William Withering's use of digitalis and contemporary drug testing protocols.

If the statement is correct for **both** of these place a tick (✓) in the box, and if it is not correct for **both**, place a cross (✗) in the box.

(3)

Statement	Tick (✓) or cross (✗)
Correct dosage investigated	
Tested on animals	
A double blind trial undertaken	

(Total for Question 6 = 11 marks)

