

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

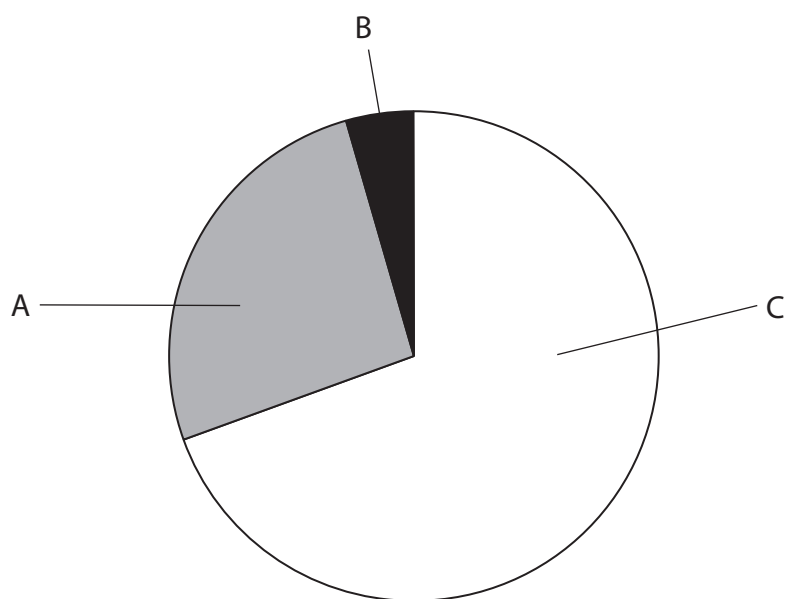
☐ **B** Phase 2

☐ **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 .....

.....

.....



- (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)

This image shows a full page of white paper with horizontal dashed lines, typical of primary-ruled notebook paper. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

(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)

