



Coimisiún na Scrúduithe Stáit  
State Examinations Commission

Leaving Certificate Examination 2014  
Sample Paper

**Mathematics**  
**(Project Maths – Phase 3)**

Paper 2

Foundation Level

Time: 2 hours, 30 minutes

300 marks

Examination number
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Centre stamp
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Running total	
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For examiner	
Question	Mark
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
Total	

Grade
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## Instructions

There are **two** sections in this examination paper.

Section A	Concepts and Skills	200 marks	8 questions
Section B	Contexts and Applications	100 marks	2 questions

Answer all ten questions, as follows:

In Section A, answer:

Questions 1 to 7 and

**either** Question 8A **or** Question 8B.

In Section B, answer Question 9 and Question 10.

Write your answers in the spaces provided in this booklet. You may lose marks if you do not do so. There is space for extra work at the back of the booklet. You may also ask the superintendent for more paper. Label any extra work clearly with the question number and part.

The superintendent will give you a copy of the *Formulae and Tables* booklet. You must return it at the end of the examination. You are not allowed to bring your own copy into the examination.

You will lose marks if all necessary work is not clearly shown.

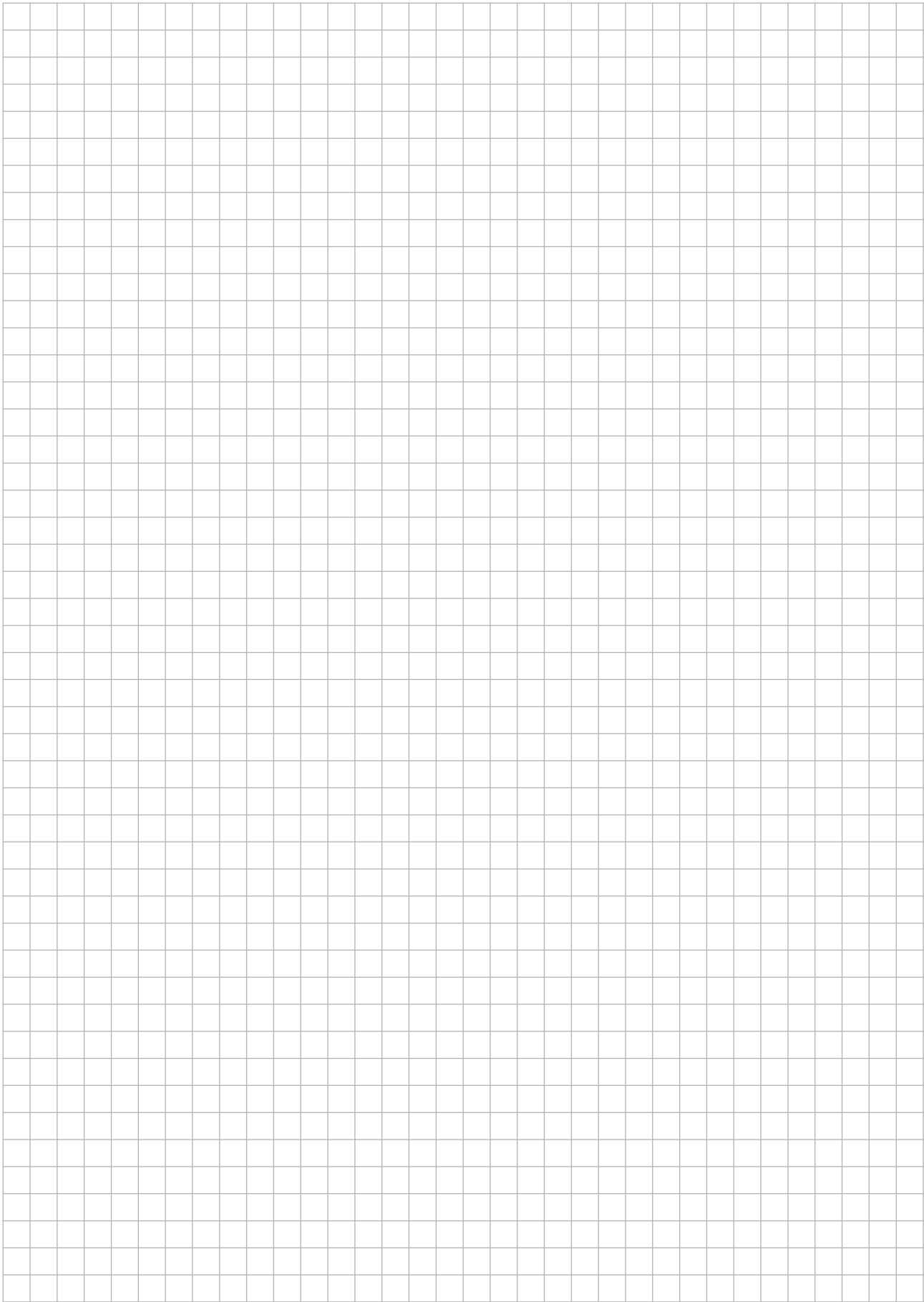
Answers should include the appropriate units of measurement, where relevant.

Answers should be given in simplest form, where relevant.

Write the make and model of your calculator(s) here:







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**Question 3**

**(25 marks)**

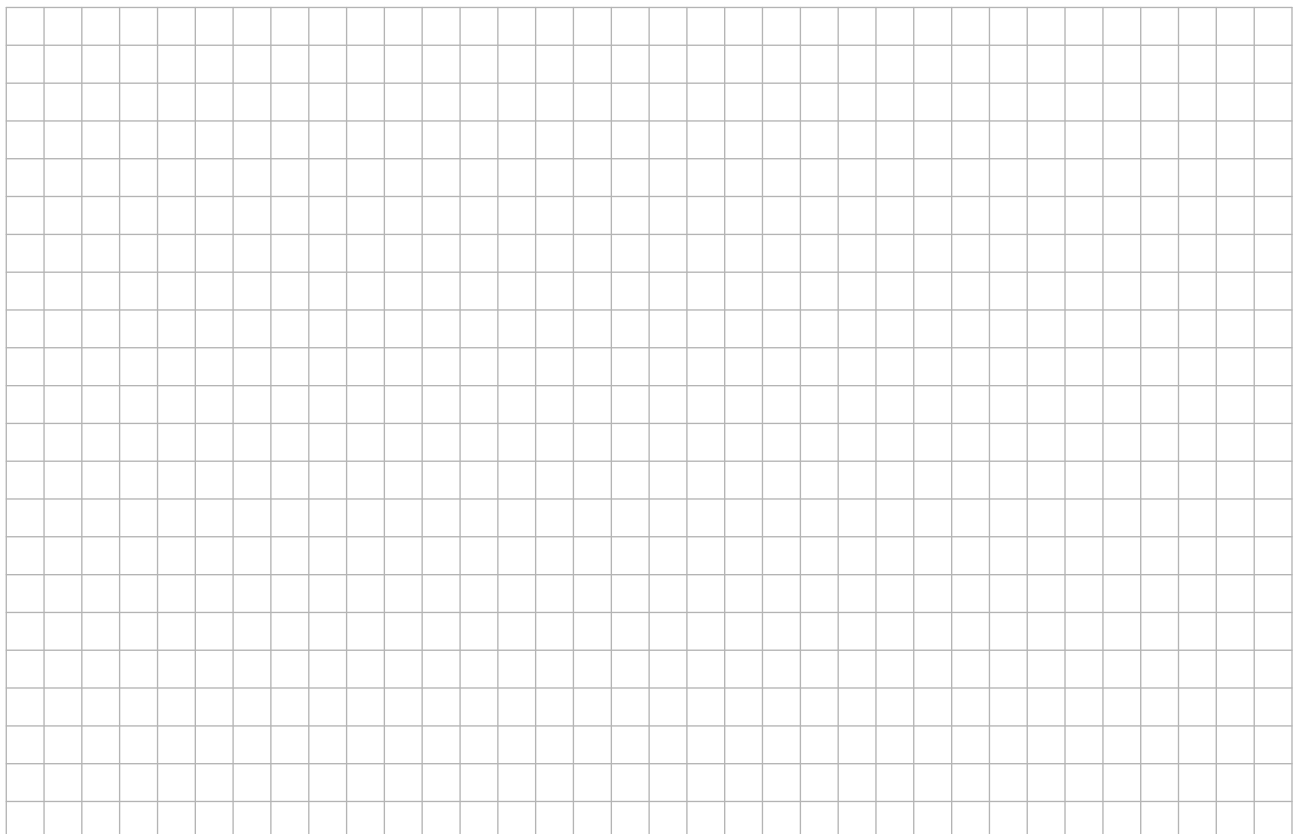
Deirdre did a survey of the Leaving Cert students in her school. She asked them what they hoped to do after they leave school. There were 50 students, and the results were as follows:

Get a job	6
Go to a third-level college	25
Do a Post-Leaving Cert course (PLC)	7
Other	4
Don't know	8

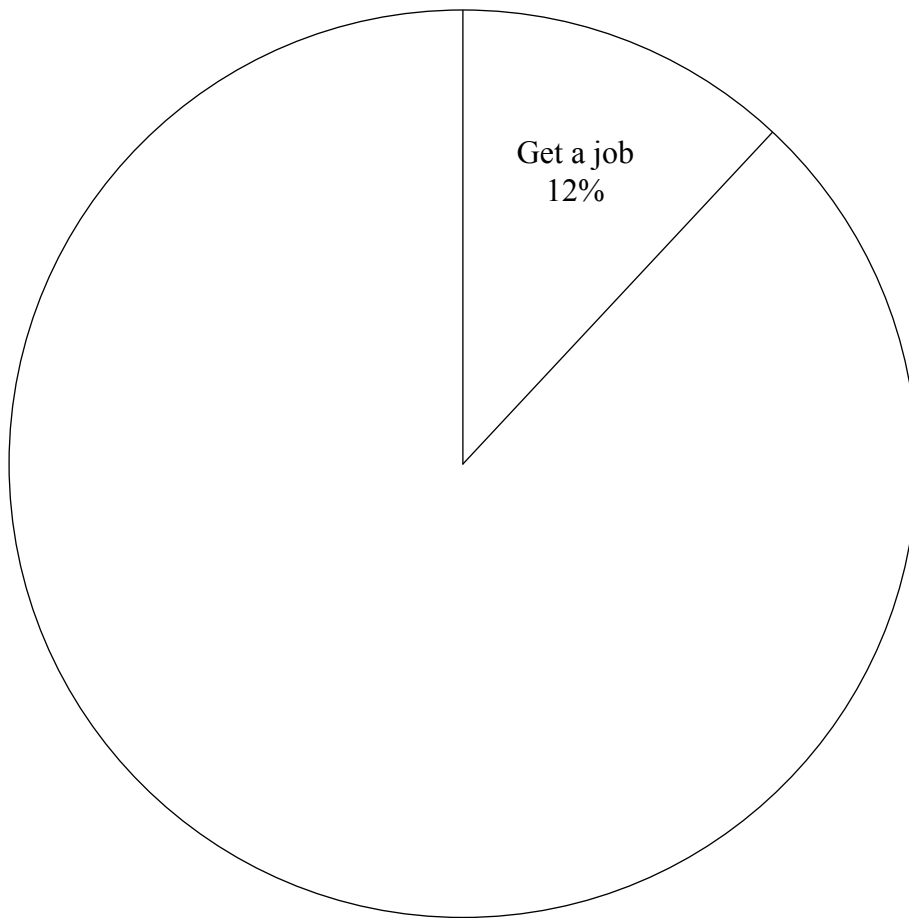
Deirdre wants to display the results as a pie chart. She works out the percentage for each answer and the number of degrees for each angle. Complete the table below to show these numbers. Give the angles to the nearest degree. The first row is already done.

Answer	Number of students	Percentage	Angle for pie chart
Get a job	6	12%	43°
Go to a third-level college	25		
Do a Post-Leaving Cert course (PLC)	7		
Other	4		
Don't know	8		
Total	50	100%	360°

Use this space for calculations, if you need to.



Use your table to complete the pie chart below.



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**Question 5**

**(25 marks)**

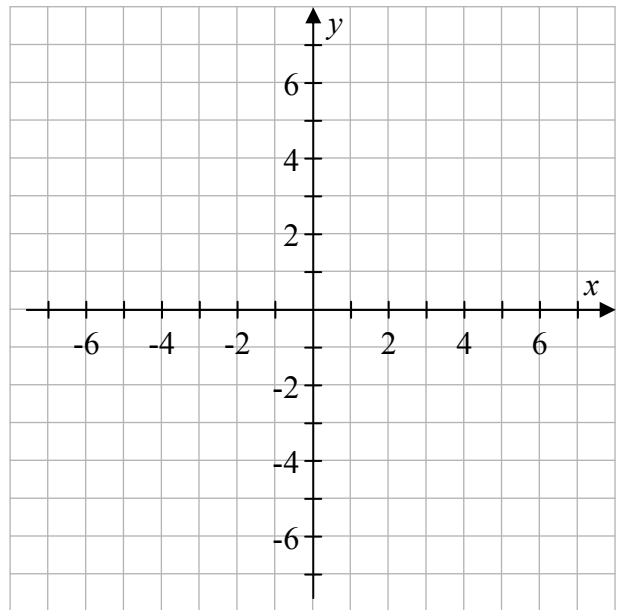
The points  $A$ ,  $B$ , and  $C$  have co-ordinates as follows:

$A(3, 5)$

$B(-6, 2)$

$C(5, -2)$

- (a) Plot  $A$ ,  $B$ , and  $C$  on the diagram, and show the triangle  $ABC$ .



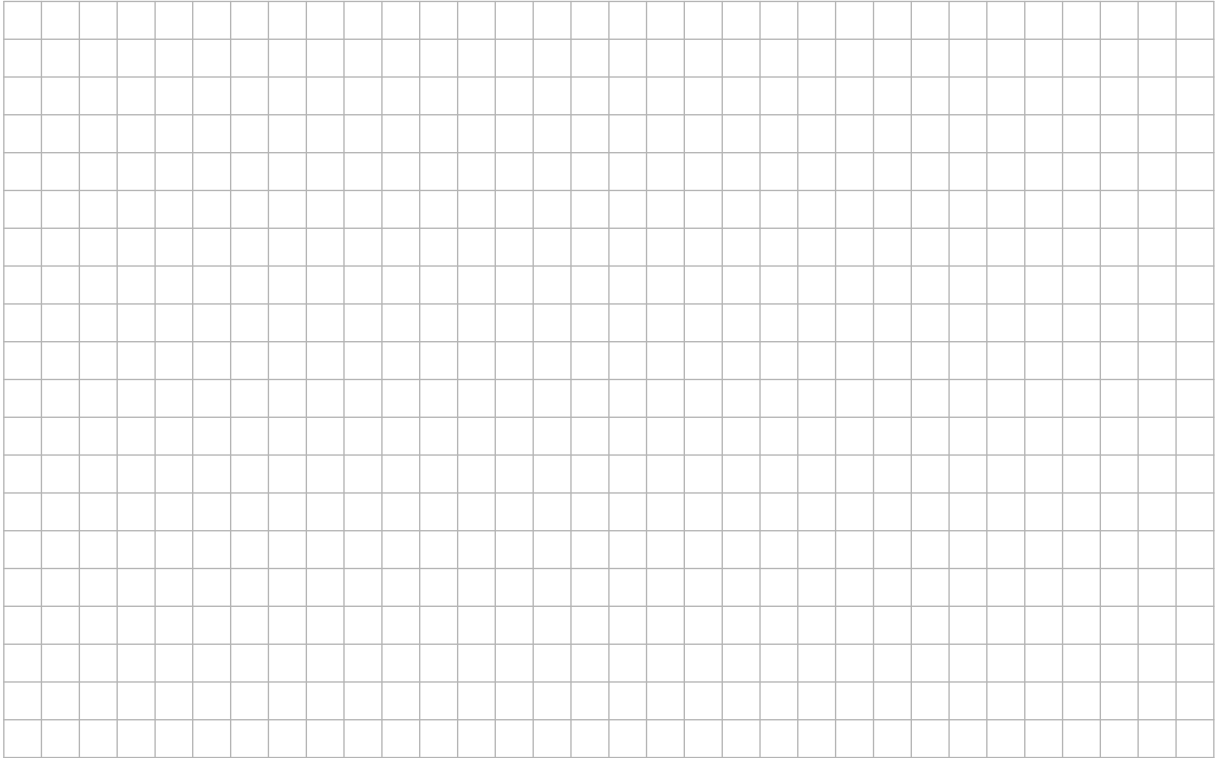
- (b) Find the lengths of the three sides of the triangle.

$ AB  =$ _____	$ BC  =$ _____	$ CA  =$ _____
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*This question continues on the next page.*

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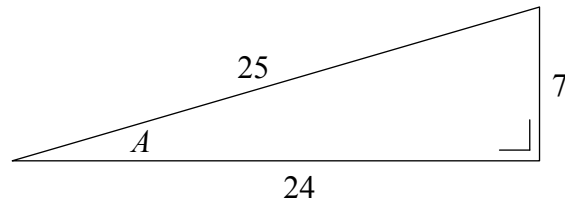
(c) Using your answers to part (b), or otherwise, show that the triangle is **not** right-angled at  $A$ .





**Question 7****(25 marks)**

The diagram shows a right-angled triangle with sides of lengths 25 units, 24 units, and 7 units.



- (a) State the length of the *hypotenuse* of this triangle.

Answer: \_\_\_\_\_

- (b) State the length of the side *opposite*  $A$ .

Answer: \_\_\_\_\_

- (c) Write down the value of  $\sin A$ , as a fraction.

Answer: \_\_\_\_\_

- (d) Use your calculator to find  $A$ , correct to the nearest degree.

Answer: \_\_\_\_\_











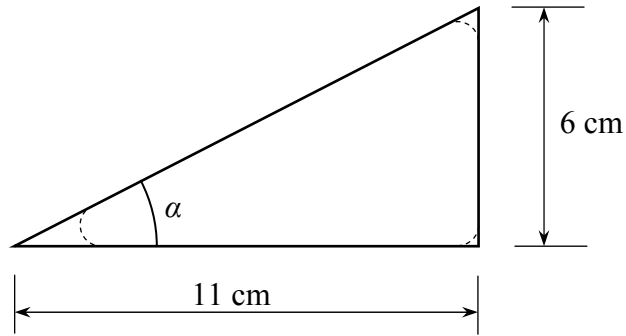
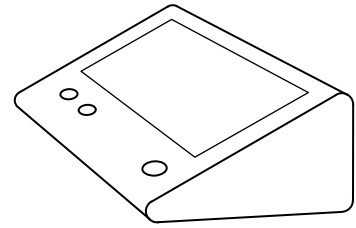


(b) The circuit board is for an electronic game.

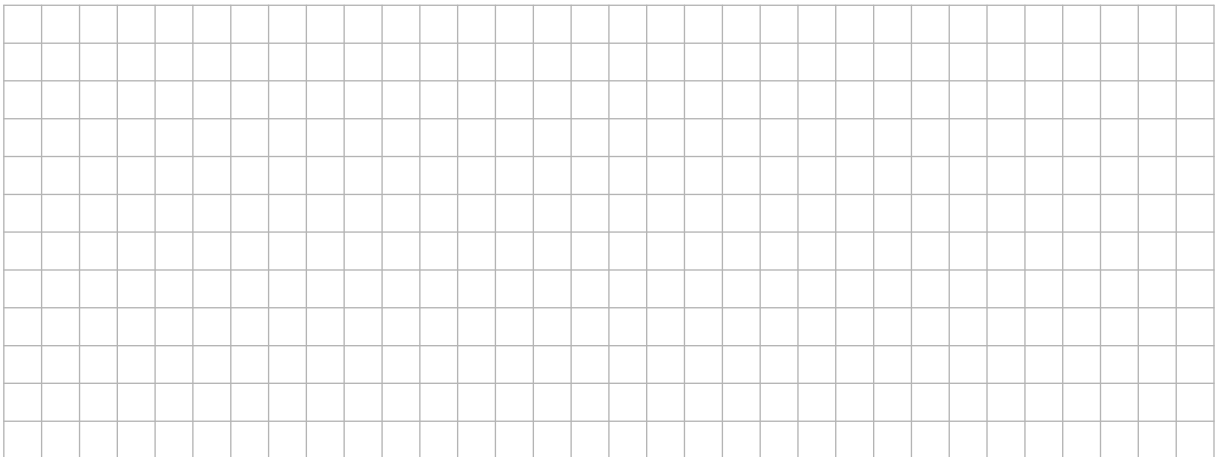
The side panel of the game is approximately triangular.

The drawing below is for the side panel.

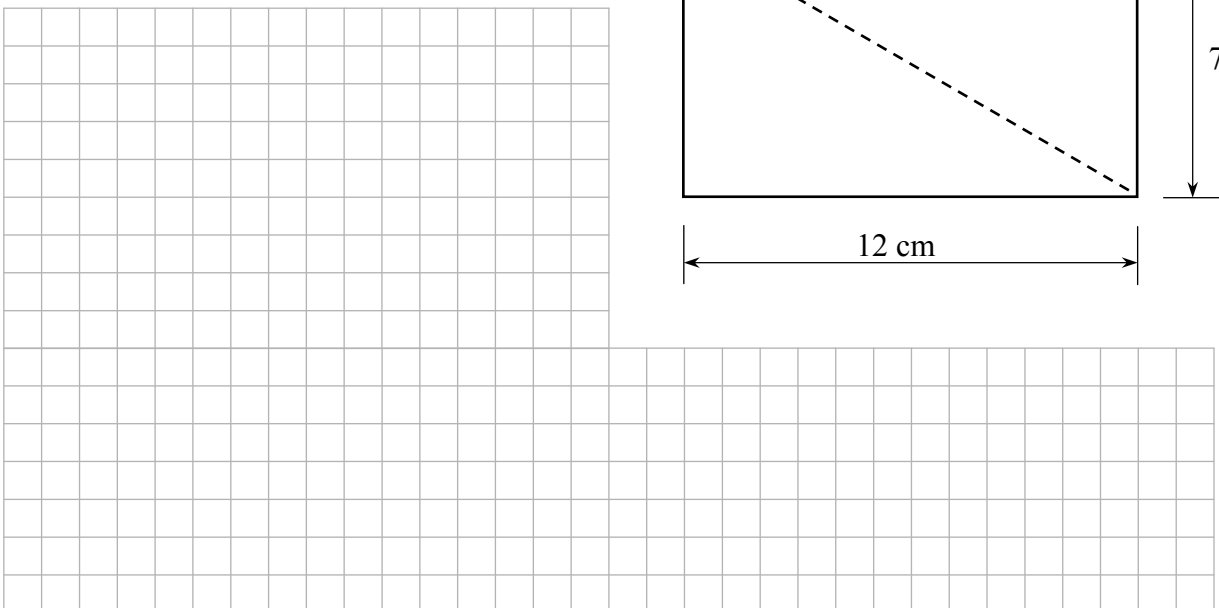
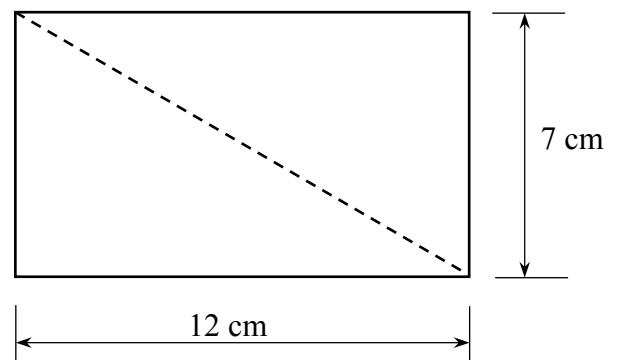
The measurements are as shown.



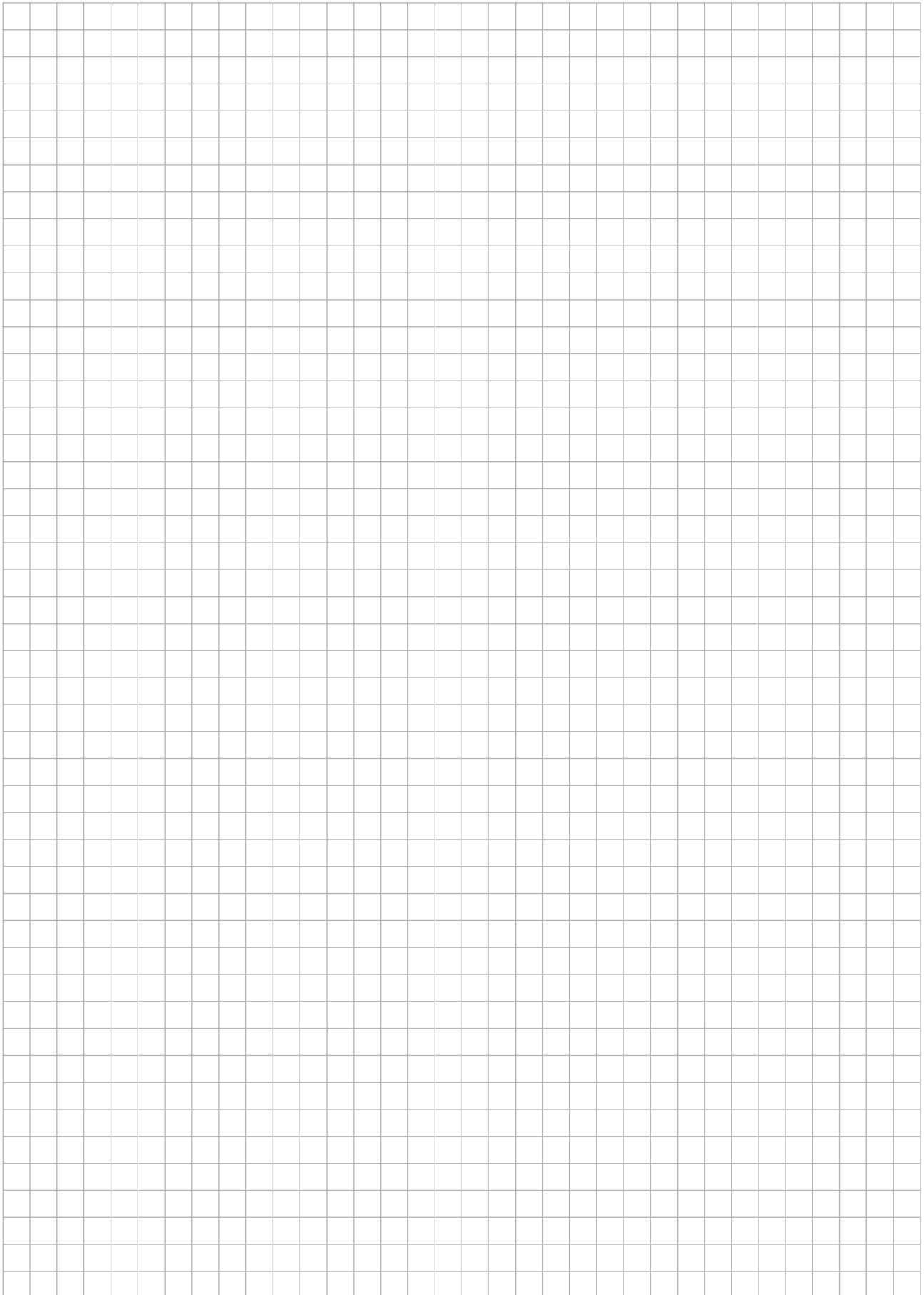
Find  $|\angle \alpha|$ , correct to the nearest degree.



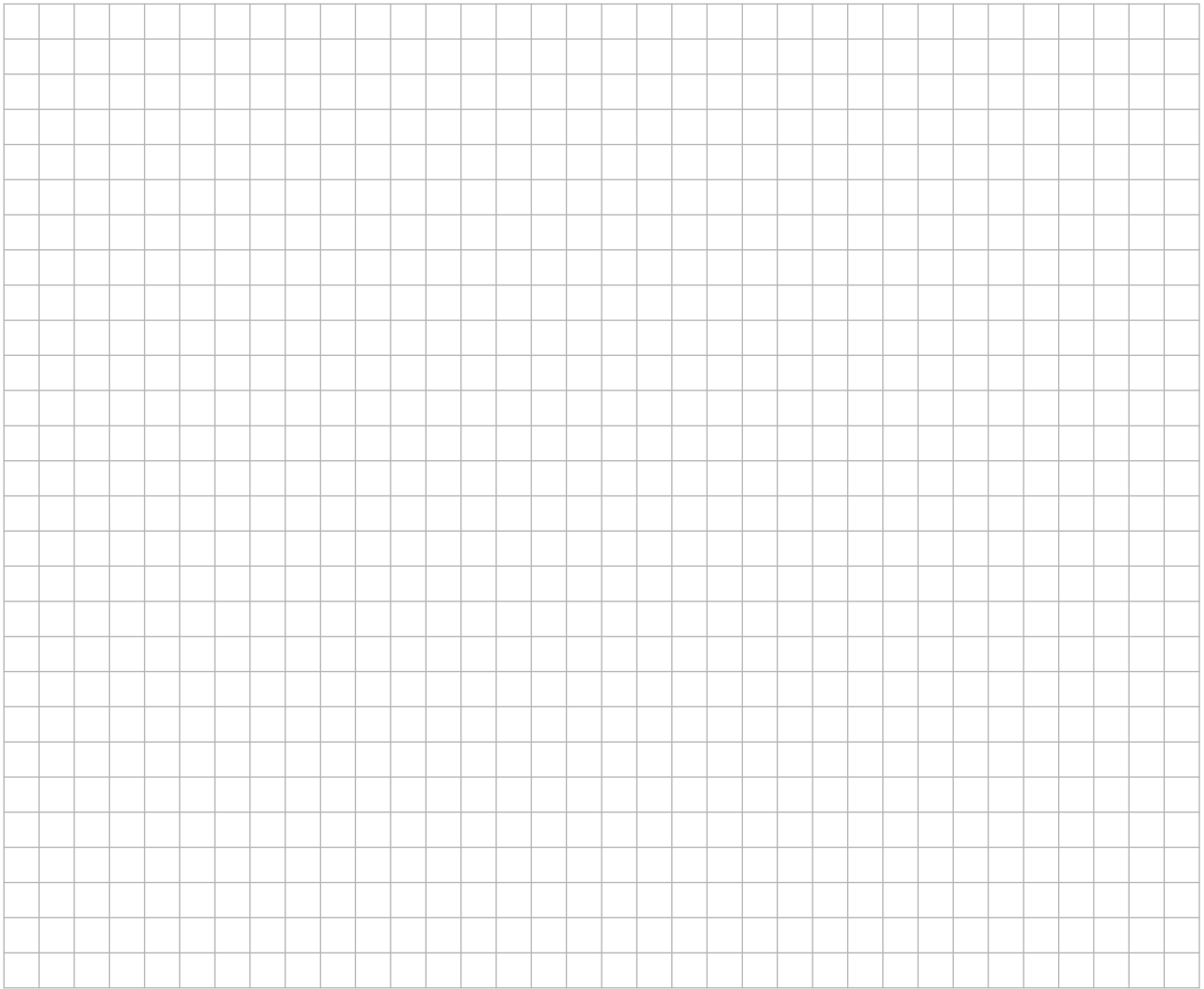
(c) The screen measures 7 cm by 12 cm.  
Find the length of the diagonal of the screen.



You may use this page for extra work



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*Note to readers of this document:*

This sample paper is intended to help teachers and candidates prepare for the June 2014 examination in *Mathematics* under Phase 3 of *Project Maths*. The content and structure do not necessarily reflect the 2015 or subsequent examinations.

Section A of the examination paper will consist of eight questions, each carrying 25 marks. In accordance with the footnote in the syllabus in relation to geometry, there will be a choice within Question 8, as illustrated here.

Section B will consist of two, three, or four questions. These questions will not necessarily carry equal marks. The number of marks for each will be stated on the examination paper. The total number of marks for Section B will be 100.

Leaving Certificate 2014 – Foundation Level

## Mathematics (Project Maths – Phase 3) – Paper 2

Sample Paper

Time: 2 hours 30 minutes