



Coimisiún na Scrúduithe Stáit
State Examinations Commission

Junior Certificate Examination, 2013
Sample Paper

Mathematics

(Project Maths – Phase 3)

Paper 1

Ordinary Level

Time: 2 hours

300 marks

Examination number

Centre stamp

Running total	
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For examiner			
Question	Mark	Question	Mark
1		11	
2		12	
3		13	
4		14	
5			
6			
7			
8			
9			
10		Total	

Grade

Instructions

There are 14 questions on this examination paper. Answer **all** questions.

Questions do not necessarily carry equal marks. To help you manage your time during this examination, a maximum time for each question is suggested. If you remain within these times you should have about 10 minutes left to review your work.

Write your answers in the spaces provided in this booklet. 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.

Marks will be lost 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:

Question 9**(Suggested maximum time: 10 minutes)**

Tina is standing beside a race-track. A red car and a blue car are travelling in the same direction at steady speeds on the track. At a particular time the red car has gone 70 m beyond Tina and its speed is 20 m/s. At the same instant the blue car has gone 20 m beyond Tina and its speed is 30 m/s.

- (a) Complete the table below to show the distance between the red car and Tina and the Blue car and Tina during the next 9 seconds.

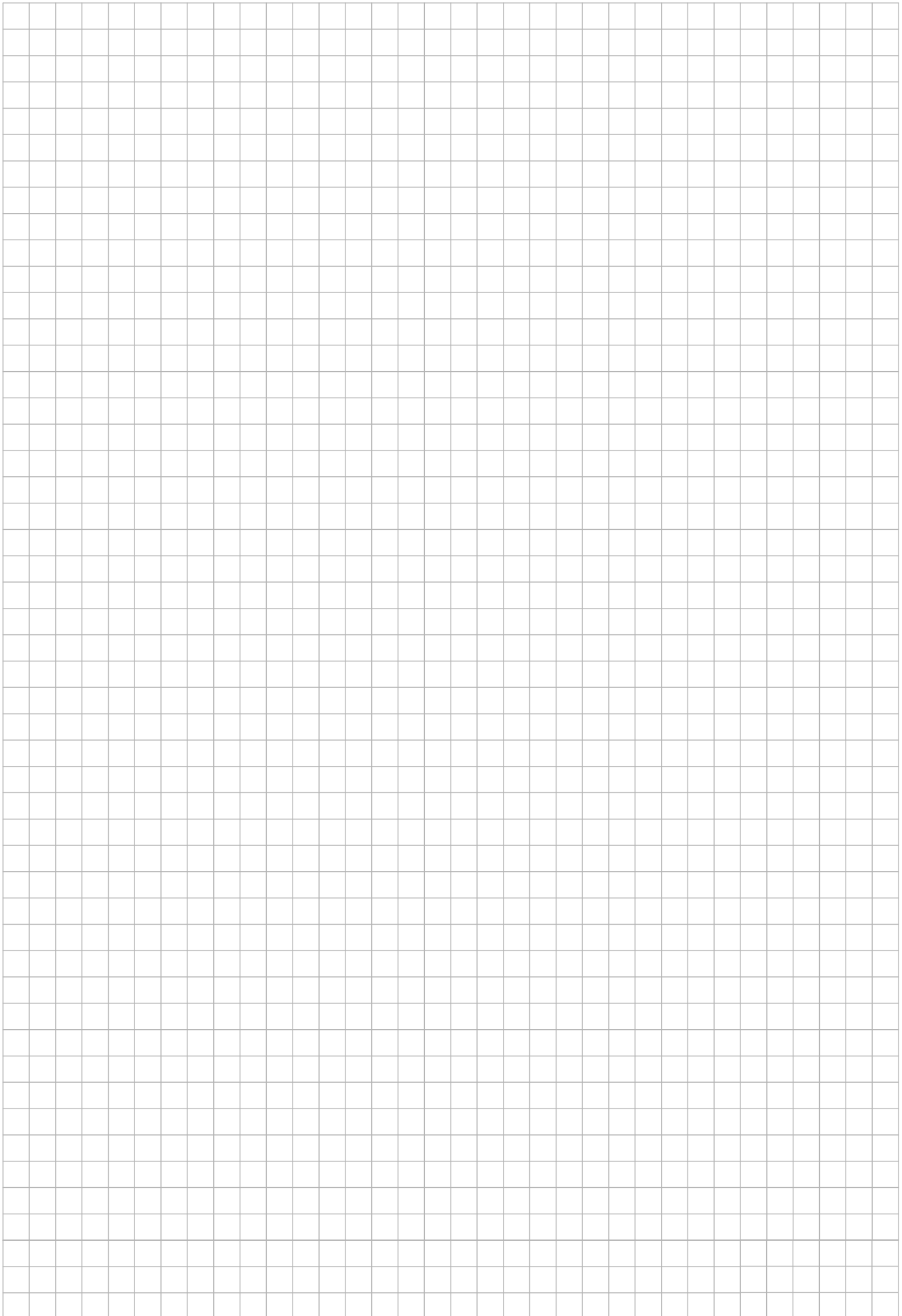
Time	Red Car Distance (m)	Blue Car Distance (m)
0	70	20
1	90	50
2		
3		
4		
5		
6		
7		
8		
9		

- (b) After how many seconds will both cars be the same distance from Tina? _____
- (c) After 8 seconds which car is furthest away from Tina and how far ahead of the other car is it?

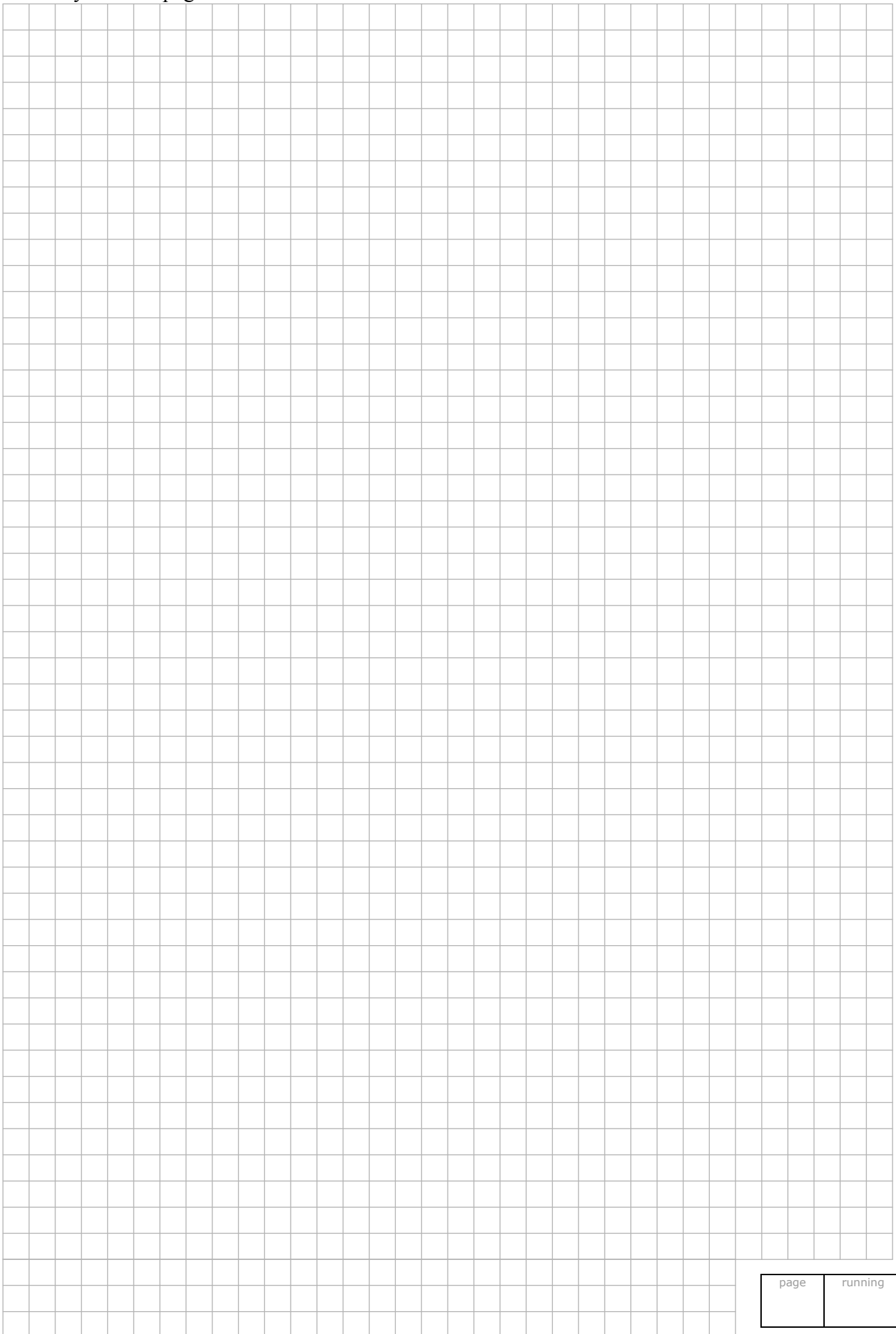
Furthest from Tina =	
Distance between cars =	

- (d) On the diagram on the next page draw graphs of the distance between the red car and Tina and the distance between the blue car and Tina over the 9 seconds.

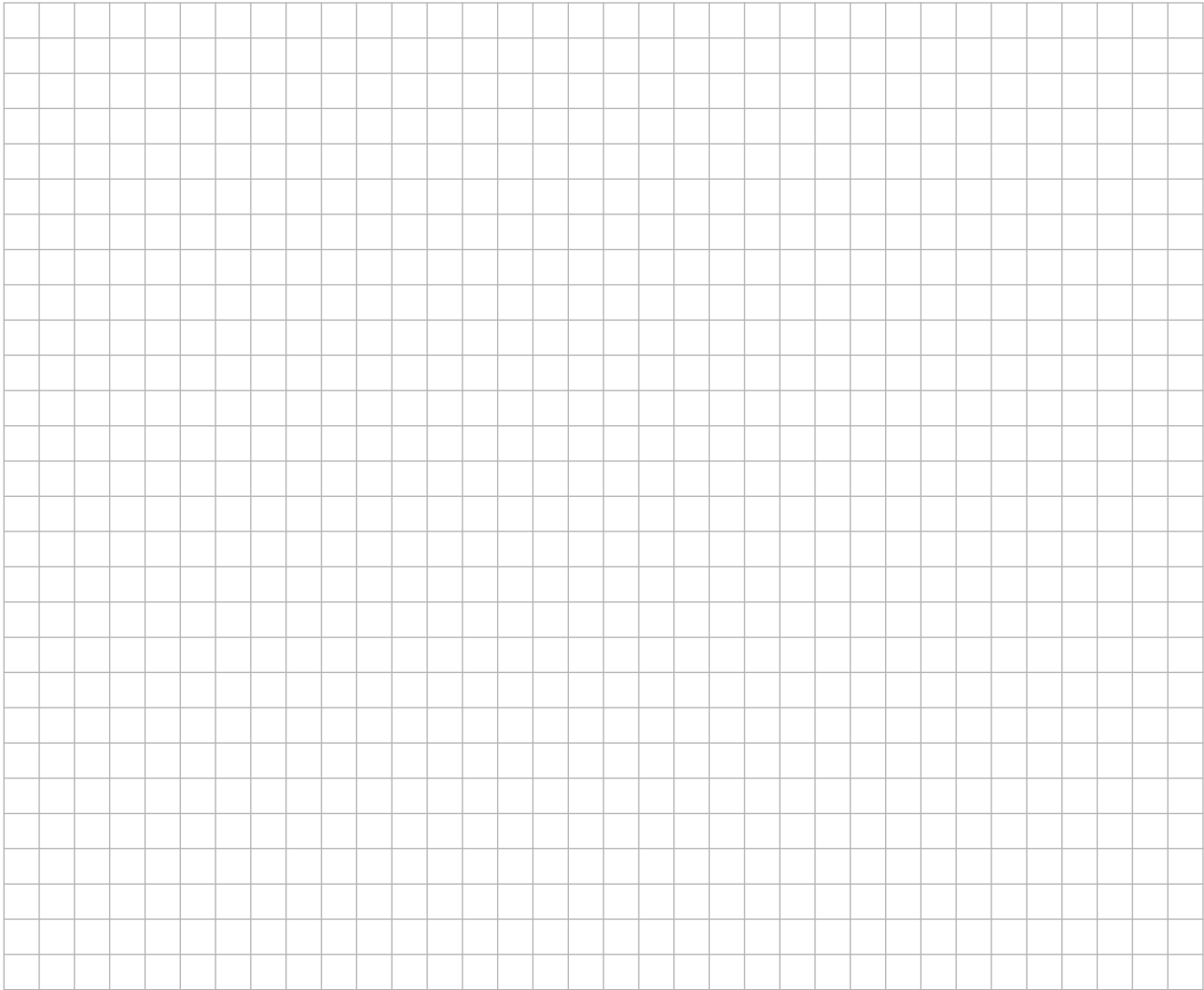
You may use this page for extra work.



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 2013 Mathematics examination in the *Project Maths* initial schools. The content and structure do not necessarily reflect the 2014 or subsequent examinations in the initial schools or in all other schools.

The number of questions on the examination paper may vary somewhat from year to year.

Junior Certificate – Ordinary Level

Mathematics (Project Maths – Phase 3) – Paper 1

Sample Paper, 2013

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