

## Guidance on the use of past paper questions for National 5 Mathematics

The new Courses at National 5 draw on the strengths of popular areas of study from Standard Grade and Intermediate 2 with the introduction of some new content. The purpose of this support document is to help centres and departments to identify suitable past paper questions/items that could be used, or possibly amended, to support learners in their preparation for sitting question papers (exams) as part of the National 5 Course assessment. The advice in this document reflects questions selected from 2011 to 2013 [past papers](#). (If you click on the highlighted links in the columns below, this will take you to the relevant past paper.)

When utilising any past paper questions, you need to take into account the following:

- ◆ You must select questions that provide the learners with the same level of challenge as those in the National 5 Specimen Question Paper.
- ◆ You may be able to use questions as published or with amendments as suggested in the columns below for Standard Grade and Intermediate 2.
- ◆ You must use questions that adhere to the National 5 General Marking Principles and reflect the form of detailed Marking Instructions as published in the National 5 Specimen Question Paper.

If any change to a Standard Grade/Intermediate 2 question is necessary, you must ensure that:

- ◆ The style and structure matches the Specimen Question Paper for National 5.
- ◆ Marking of the learner's response to the question adheres to the General Marking Principles in the National 5 Specimen Question Paper
- ◆ Marking Instructions are amended to reflect the style of the National 5 detailed Marking Instructions.

The details below for National 5 should be read in conjunction with the relevant:

Mandatory documentation:

- ◆ Course Specification
- ◆ Unit Specifications
- ◆ Course Assessment Specification

Advice and guidance:

- ◆ Course and Unit Support Notes

Assessment:

- ◆ Question Paper Component:
  - general assessment information
  - general marking principles and detailed marking instructions

Related Information as provided in the relevant N3–N5 Course Comparison Document.

<b>Information from the Course Assessment Specification</b> Each Section of the Question paper will be made up of restricted/extended response questions. Questions will <b>sample</b> the knowledge and understanding and apply skills described in the <b>Further mandatory information on Course coverage section</b> .	<b>The columns below identify additional support questions from Standard Grade and Intermediate 2 Past Papers 2011 to 2013.</b>  Not all topic/areas of study will appear every year due to the sampling techniques used in producing question papers.			
	<b>Standard Grade Credit</b>		<b>Intermediate 2</b>	
	Use question as published	Amend question style/structure	Use question as published	Amend question style/structure
<b>Algebraic skills</b>				
Working with algebraic expressions involving expansion of brackets	<a href="#">2013 P1 Q7a</a> <a href="#">2012 P1 Q2</a> <a href="#">2011 P2 Q2</a>		<a href="#">2011 P1 Q2</a>	
Factorising an algebraic expression	<a href="#">2011 P1 Q2</a>		<a href="#">2011 P1 Q9a</a>	
Completing the square in a quadratic expression with unitary $x^2$ coefficient	This is a new skill at this level.			
Reducing an algebraic fraction to its simplest form			<a href="#">2013 P1 Q7</a> <a href="#">2011 P2 Q8</a>	
Applying the four operations to algebraic fractions			<a href="#">2013 P2 Q11</a> <a href="#">2012 P2 Q7</a> <a href="#">2011 P2 Q9</a>	
Determining the equation of a straight line given the gradient		<a href="#">2011 P1 Q8a</a>	<a href="#">2013 P1 Q2</a> <a href="#">2011 P1 Q8</a>	<a href="#">2012 P1 Q3a</a>
Working with linear equations and inequations	<a href="#">2013 P1 Q7b</a> <a href="#">2011 P1 Q4</a>			

Working with simultaneous equations	<a href="#">2013 P1 Q6</a> <a href="#">2011 P1 Q7</a>	<a href="#">2012 P1 Q8</a>	<a href="#">2013 P1 Q4</a> <a href="#">2012 P2 Q6</a> <a href="#">2011 P2 Q7</a>	
Changing the subject of a formula	<a href="#">2013 P1 Q4</a> <a href="#">2012 P1 Q3</a>		<a href="#">2013 P2 Q8</a> <a href="#">2012 P2 Q9</a> <a href="#">2011 P2 Q3</a>	
Recognising and determining the equation of a quadratic function from its graph	This topic is treated slightly differently at National 5, therefore there are no equivalent questions.			
Sketching a quadratic function	This topic is treated slightly differently at National 5, therefore there are no equivalent questions.			
Identifying features of a quadratic function		<a href="#">2013 P1 Q10</a> <a href="#">2012 P1 Q6</a>	<a href="#">2013 P1 Q9</a>	
Working with quadratic equations	<a href="#">2012 P1 Q7</a> <a href="#">2012 P2 Q13b</a> <a href="#">2011 P2 Q3</a>	<a href="#">2011 P2 Q13</a>	<a href="#">2013 P2 Q5</a> <a href="#">2012 P1 Q6</a> <a href="#">2012 P2 Q4</a> <a href="#">2011 P1 Q9b,c</a> <a href="#">2011 P2 Q11</a>	
<b>Geometric skills</b>				
Determining the gradient of a straight line, given two points			<a href="#">2011 P2 Q1</a>	
Calculating the length of arc or the area of a sector of a circle	<a href="#">2012 P2 Q4</a> <a href="#">2011 P2 Q5</a>	<a href="#">2013 P2 Q8</a>	<a href="#">2013 P1 Q3</a> <a href="#">2012 P2 Q1</a> <a href="#">2011 P2 Q5</a>	
Calculating the volume of a standard solid		<a href="#">2013 P2 Q3</a> <a href="#">2012 P2 Q3</a> <a href="#">2011 P2 Q9</a>	<a href="#">2013 P2 Q7</a> <a href="#">2012 P2 Q3</a> <a href="#">2011 P2 Q4</a>	
Applying Pythagoras' theorem	<a href="#">2013 P2 Q6</a> <a href="#">2013 P2 Q11a</a> <a href="#">2012 P1 Q4</a> <a href="#">2012 P2 Q11a</a> <a href="#">2011 P2 Q8</a>			
Applying the properties of shapes to determine an angle involving at least two steps	<a href="#">2011 P2 Q7a</a>		<a href="#">2013 P1 Q5</a> <a href="#">2013 P2 Q12</a> <a href="#">2012 P1 Q4</a> <a href="#">2012 P2 Q10</a> <a href="#">2011 P1 Q3</a> <a href="#">2011 P2 Q13</a>	

Using similarity	<a href="#">2012 P2 Q8</a> <a href="#">2012 P2 Q13a</a> <a href="#">2011 P2 Q6</a>			
Working with 2D vectors	This is a new skill at this level.			
Working with 3D coordinates	This is a new skill at this level.			
Using vector components	This is a new skill at this level.			
<b>Trigonometric skills</b>				
Working with the graphs of trigonometric functions	<a href="#">2011 P2 Q12</a>	<a href="#">2013 P2 Q12</a>	<a href="#">2013 P1 Q10</a> <a href="#">2012 P1 Q9</a> <a href="#">2011 P1 Q7</a>	
Working with trigonometric relationships in degrees			<a href="#">2013 P1 Q8</a> <a href="#">2013 P2 Q13</a> <a href="#">2012 P2 Q8</a> <a href="#">2012 P2 Q14</a> <a href="#">2011 P1 Q10</a> <a href="#">2011 P2 Q10</a> <a href="#">2011 P2 Q14</a>	
Calculating the area of a triangle using trigonometry	<a href="#">2012 P2 Q9</a>	<a href="#">2013 P2 Q5</a>	<a href="#">2012 P1 Q7</a>	
Using the sine and cosine rules to find a side or angle in a triangle	<a href="#">2013 P2 Q9</a> <a href="#">2012 P2 Q7</a> <a href="#">2012 P2 Q11b</a> <a href="#">2011 P1 Q10</a> <a href="#">2011 P2 Q7b</a>		<a href="#">2013 P2 Q4</a> <a href="#">2013 P2 Q10</a> <a href="#">2012 P2 Q12</a>  <a href="#">2011 P1 Q5</a> <a href="#">2011 P2 Q12</a>	
Using bearings with trigonometry	This topic did not appear in recent past papers due to sampling requirements.			
<b>Numerical skills</b>				
Working with surds	<a href="#">2011 P1 Q9a</a>		<a href="#">2012 P1 Q10</a> <a href="#">2011 P1 Q4</a>	
Simplifying expressions using the laws of indices	<a href="#">2012 P1 Q10</a>		<a href="#">2013 P2 Q9</a> <a href="#">2012 P2 Q11</a> <a href="#">2011 P1 Q6</a>	

Rounding to a given number of significant figures			<a href="#">2012 P1 Q1</a>	<a href="#">2011 P2 Q2</a>
Working with percentages	<a href="#">2013 P2 Q4</a> <a href="#">2013 P2 Q7</a> <a href="#">2012 P2 Q1</a> <a href="#">2012 P2 Q6</a> <a href="#">2011 P2 Q1</a> <a href="#">2011 P2 Q4</a>		<a href="#">2013 P2 Q2</a>  <a href="#">2012 P2 Q13</a>  <a href="#">2011 P2 Q2</a>	
Working with fractions	<a href="#">2013 P1 Q2</a> <a href="#">2012 P1 Q5</a> <a href="#">2011 P1 Q5</a>			
<b>Statistical skills</b>				
Comparing data sets using statistics	<a href="#">2013 P1 Q3</a>	<a href="#">2012 P2 Q2</a>	<a href="#">2012 P1 Q5</a>	<a href="#">2013 P2 Q6b</a> <a href="#">2012 P2 Q5b</a> <a href="#">2011 P2 Q6b</a>
Forming a linear model from a given set of data	This topic did not appear in recent past papers due to sampling requirements.			
<b>Resources</b>				
SQA past papers <a href="http://www.sqa.org.uk/pastpapers/findpastpaper.htm">www.sqa.org.uk/pastpapers/findpastpaper.htm</a>	Additional National 5 assessment support material is available here:  Education Scotland <a href="http://www.educationscotland.gov.uk/">www.educationscotland.gov.uk/</a>  Glow <a href="http://www.educationscotland.gov.uk/usingglowandict/">www.educationscotland.gov.uk/usingglowandict/</a>  Glow Log-in <a href="https://secure.glowscotland.org.uk/login/login.htm">https://secure.glowscotland.org.uk/login/login.htm</a>			