



Welcome to the GCSE Maths Linked Pair Pilot Newsletter.

Recently, you may have received the news that the Department for Education have agreed, in principle that the GCSE Mathematics Linked Pair Pilot will be extended for a further two years, in line with proposed timelines for new GCSEs . As with other GCSEs, the linked pair will be available as a linear specification for all new cohorts starting September 2012. At the time of writing, we are still working out the details of the transition timeline with the DfE, please find the provisional details below.

**Transition from modular to linear specifications – from September 2012
(subject to confirmation)**

Date	Modular Specification	Linear Specification
Sept 2012	Start of final teaching year of modular specifications.	
Nov 2012	All assessments available.	
May/June 2013	Assessments for modular specification available (final full series).	
Nov 2013	All assessments available (intended as a re-sit opportunity) Final opportunity to claim certification for <u>modular</u> specifications.	
May/June 2014	-	All assessments available. First certification opportunity for <u>linear</u> specification.
Nov 2014	-	All assessments available.
May/June 2015	-	All assessments available.
Nov 2015	-	All assessment available. (Intended as a re-sit opportunity) Final opportunity for certification of <u>linear</u> specification.

Your questions answered

Why have the linked pair GCSEs been extended and why are they becoming linear assessments?

These qualifications have been extended in line with current plans for GCSE reform which outline a new GCSE mathematics being available for teaching in September 2014. The extension has been given in order to support pilot centres with a smooth transition from the linked pair to the new GCSE when it is available. Should the introduction of new GCSEs be delayed beyond 2014, it is anticipated that a further extension will be granted for the linked pair. These qualifications are becoming linear in line with all other GCSEs available in England.

Will we be issued with new specifications for the two linked pair qualifications?

Yes, we will be making minor changes to the specification to reflect the fact that the assessment is now linear, and that the operational dates have been extended. We will make this available to centres as soon as possible, electronically. It is not anticipated that there will be any changes to the content or the assessments. For teaching purposes, you should continue to use the existing specification until you receive the new one. Changes in the new specification will be clearly marked.

Will the format of the assessments change?

No, other than the fact that the linear specifications require candidates to sit both qualifying units in the same series, the assessments themselves will remain unchanged. **NB candidates are not required to sit both Methods and Applications GCSEs in the same series, although this may be done if required.**

Will early entry still be allowed when linear specifications are in place?

Early entry will still be allowed. Students entering in November sessions can be entering for the first time.

Will retakes of the GCSE qualification be allowed once the linear specifications are in place?

Students will be allowed to re-take linear GCSEs as many times as required - there will be no limit.

Will the unit entry and certification (cash-in) codes change for the linear spec?

No.

Do learners still have to do both of the linked pair GCSEs?

Yes, Methods and Applications jointly cover the KS4 programme of study for mathematics, learner should take both qualifications. Whilst each of the GCSEs are qualifications in their own right, in order to have their grade contribute to the maths indicator in the headline measures, learners must have been entered for, and have attempted both GCSEs. Whilst each GCSE will become linear in its own respect, the two qualifications may be sat in separate series; for example, candidates may take *Methods* in Year 10 and *Applications* in Year 11.

If you have any further questions regarding the changes to this qualification please contact us.

Key Dates for 2012/13

Date	Action	Unit codes
20 th September 2012	Last date for receipt by Edexcel for Enquiries about Results (EARs) applications for Summer 2012	All
4 th October 2012	Entry Deadline for November 2012 series	All
6 th November 2012 (am)	Exam - Application of Mathematics Unit 1	5AM1F, 5AM1H
8 th November 2012 (pm)	Exam - Application of Mathematics Unit 2	5AM2F, 5AM2H
12 th November 2012 (am)	Exam - Methods of Mathematics Unit 1	5MM1F, 5MM1H
13 th November 2012 (am)	Exam - Methods of Mathematics Unit 2	5MM2F, 5MM2H
21 st March 2013	Entry Deadline for June 2013 series	All
11 th June 2013 (am)	Exam - Application of Mathematics Unit 1	5AM1F, 5AM1H (Provisional Date)
14 th June 2013 (am)	Exam - Application of Mathematics Unit 2	5AM2F, 5AM2H (Provisional Date)
17 th June 2013 (am)	Exam - Methods of Mathematics Unit 1	5MM1F, 5MM1H (Provisional Date)
20 th June 2013 (am)	Exam - Methods of Mathematics Unit 2	5MM2F, 5MM2H (Provisional Date)

Don't forget to visit our dedicated pilot website

To support with the delivery of the new topics in the linked

06:00 – 07:00 Prob of being late = $\frac{24}{337} = 0.0712$ ← The risk of any one train being late in this period is 0.0712, correct to 5 significant figures.

07:00 – 08:00 Prob of being late = $\frac{25}{337} = 0.1009$

08:00 – 09:00 Prob of being late = $\frac{40}{337} = 0.1187$

09:00 – 10:00 Prob of being late = $\frac{40}{337} = 0.1187$

One way to compare is to use the figures to calculate probabilities of being late.

In order of reliability (most reliable first), the periods are:
08:00 – 09:00, 09:00 – 10:00, 06:00 – 07:00, 07:00 – 08:00

An estimate of the number of late trains = $450 \times 0.0980 = 44.1$
An estimate of the cost = $44.1 \times £3000 = £132,300$

Example 3 A company generates electricity from an offshore site with wind turbines. If a high wind becomes a gale the probability of damage to the wind turbines increases. The probability of damage in a gale is 0.04. The probability of damage in a high wind is 0.005. The probability that a high wind becomes a gale is 0.3. This site has 50 high wind days each year. Work out an estimate for the number of times it will be damaged in a period of 10 years.

Probability of damage on one day = $0.7 \times 0.005 + 0.3 \times 0.04 = 0.0155$
Number of times it will be damaged = $0.0155 \times 50 \times 10 = 7.75$

Either:
High wind and damage
or
gale and damage

pair, we have created an online book which complements the text book available for the single GCSE. This book is free and exclusive to Edexcel pilot centres, and can be accessed by any teachers in centres

offering our linked pair pilot. You just need your Edexcel online password to download each of the chapters. Please see your Exams Officer if you don't have a password yet. Other resources on the website to support you with delivery and assessment, include sample assessment and practice materials, mock papers, schemes of Work and content exemplification.

www.edexcel.com/linkedpairpilot

Join the NCETM Forum

The NCETM website details a programme called 'Preparing to teach the Linked-Pair Pilot GCSEs'. The purpose of this workshop is to support mathematics departments in their preparation to teach the Linked-Pair Pilot GCSEs. You will explore the content of the specifications and begin the process of creating resources.

Additional support is available by joining the forum on the NCETM portal. This is a space to communicate with other centres from all the examination boards who are trialling the Linked Pair of GCSEs this year – to do this please contact NCETM directly.

www.ncetm.org.uk

Methods 3.2 Intersecting Chords

Circle. DPA and BPC are straight lines.
3.6 ÷ 6 = 0.6
Use AP × PC = BP × PD

A, B, C and D are points on a circle. FAB and PCD are straight lines.
PA = 4 cm, AB = 11 cm, PC = 5 cm.
Work out the length of DC.

4 × 15 = 5 × PD PD = 60 ÷ 5 = 12
CD = 12 – 5 = 7 cm
Use PA × PB = PC × PD

Example 4
X, Y and Z are 3 points on a circle.
PXZ is a straight line. PX is a tangent to the circle at X. PX = 6 cm, YZ = 5 cm.
Find the length of PZ.

Let PY = x cm
Use PY × PZ = PX²
PZ = PY + 5 = x + 5

$x(x + 5) = 6^2$ $x^2 + 5x - 36 = 0$
Expand the brackets and collect the terms on the left-hand side.

$(x + 9)(x - 4) = 0$ $x = -9$ or $x = 4$
Solve by factorising or using the quadratic formula.

PY = 4, PZ = 9
Select the positive value of x.

The Maths Emporium

The Maths Emporium is managed by Graham Cumming, Edexcel's Maths Business Manager, this site covers all Edexcel maths qualifications as well as documents relating to the Pilot, which includes QCA 'think pieces', fact sheets and Pilot textbooks and exercises.

www.edexcelmaths.com

Are you still taking part?

Please let us know if you are no longer taking part in this pilot, we have other centres keen to join and would like to offer any spare places for a September start. Please email us at gcsemathspilot@pearson.com to update us.

Do we know how to contact you?

It is very important that you let us know if you are no longer the person to whom all GCSE Maths Linked Pair Pilot information should be sent to, or if you have changed your email address please contact gcsemathspilot@pearson.com to update us. We are happy to have more than one contact per centre.

Contact us

Where possible, all customer service enquiries for the Linked Pair Pilot are dealt with by our Customer Services Teams, contact details [here](#) alternatively queries can be directed as follows:

Pilot queries:

gcsemathspilot@pearson.com

Subject specialist queries:

gcsemaths@edexcelexperts.co.uk

Who's who on the Linked Pair Pilot?

Hayley Dalton - Project Manager

Graham Cumming – Senior Manager for mathematics

Emma Hill – Project Coordinator

Suha Yassin – Product Manager (mathematics)