

Year Group Mathematics Tests

Purpose of the tests

These tests have been designed to help teachers:

- assess against the year group expectations; and
- use assessment to plan for next steps in learning.

Fundamental principles of the tests

The questions take account of the underlying principles outlined in the National Curriculum for mathematics. As pupils become competent mathematicians they develop the following characteristics:

- They become fluent in the fundamentals of mathematics. This includes varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- They should reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language.
- They can solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps persevering in seeking solutions.

This follows the basic principles established by the National Centre for Excellence in the Teaching of Mathematics that:

- Able pupils should be challenged (and learning deepened) through more complex problem solving rather than accelerated through new material. This is a key feature of the mathematics curriculum, and is a large shift away from well-established practice under the previous National Curriculum.
- Teachers should be wary of giving questions and problems involving harder numbers to more-able pupils – the increase in challenge should come from thinking harder about the concept or topic being taught.

Key features of the mathematics assessments

These assessments are provided to help teachers assess how children are progressing towards the end of year expectations. The questions presented here primarily focus on new areas of the curriculum. The questions in the mathematics tests will not necessarily appear in order of difficulty and will not cover every aspect of the programme of study.

The termly assessments take account of the test frameworks for the National Curriculum. Please note that these assessments are not designed to match the frameworks in terms of ratios of question/item type or coverage. They aim to help teachers assess whether pupils are on track to meet the end of year expectations and plan for next steps in learning.

Structure of the tests

Paper 1:	Paper 2:
<ul style="list-style-type: none">• Paper 1 is a basic paper testing different competencies, mainly through calculations. Effectively, paper 1 tests the 'meeting' National Standards component.• Paper 1 includes a number of questions linked to national curriculum areas such as place value, addition and subtraction, multiplication and division, fractions, measures and geometry.• Any of the text in shaded areas can be read to the pupils.• Additional marks will not be awarded for working out. Pupils should, however, be encouraged to use an appropriate method for the more challenging calculations. It is expected that pupils will use mental methods to work out the answers for some questions.• Pupils should be provided with apparatus, as needed, as normal classroom practice dictates.	<ul style="list-style-type: none">• Paper 2 tests the ability to reason and apply mathematics. At this point, there is more of a focus on checking for 'mastery and greater depth' in mathematics.• Paper 2 assesses pupils' ability to apply mathematics to problems and to reason. The tests contain a mixture of contextualised and context-free questions, and real life and abstract problems.• Any of the test in shaded areas can be read to the pupils.• Teachers may wish to read through the test in order to ensure that pupils can fully read all elements in order to ensure that this is not a barrier to assessing mathematical understanding.• Space is provided for pupils to show their working out. It is expected that this will be in line with strategies being taught in the school for problem solving and reasoning.

Format of the tests

The tests should be used alongside teacher assessments rather than absolute assessments; with the intention of saving time for teachers. Each of the tests is provided as a Word document. The reason for this is to allow schools to make amendments, should they wish. In particular, schools may wish to amend size of numbers and/or context of questions.

Timings for the tests

Schools should decide their timing guidelines for the completion of these tests.

It is advised that the KS1 papers should not be strictly timed. Test breaks should be used in the same way as with any other assessment used in school.

It is suggested that KS2 pupils should have up to 40 minutes to complete Paper 1 and 60 minutes to complete Paper 2.

How to use the tests

All pupils should complete paper 1. Teachers should decide which pupils will cope with Paper 2. Pupils should not be put pupils under undue pressure.

The tests should be used alongside teacher assessments to help reach a summative conclusion about pupils' attainment at the end of the year in relation to the National age related expectations i.e. National Standard. The following offers an end of year position with this in mind:

Years 1 and 2		
All pupils should complete Paper 1. Teachers should decide which pupils will cope with Paper 2. Pupils should not be put pupils under undue pressure.		
Zone	Score	Terminology
Zone 1	0-5	Working Outside Year Group Expectations
Zone 2	6-10	Working Well Below National Standard
Zone 3	11-15	Working Below National Standard
Zone 4	16-25	Working towards the National Standard
Zone 5	26-35	Working at the National Standard
Zone 6	36-45	Mastery of the National Standard
Zone 7	46-55	Working at Greater Depth
Zone 8	56 - 65	Working at Exceptional Standard

Years 3, 4, 5 and 6

All pupils should complete Paper 1. Teachers should decide which pupils will cope with Paper 2. Pupils should not be put pupils under undue pressure.

Zone	Score	Terminology
Zone 1	0-10	Working Outside Year Group Expectations
Zone 2	11-20	Working Well Below National Standard
Zone 3	21-30	Working Below National Standard
Zone 4	31-40	Working towards the National Standard
Zone 5	41-50	Working at the National Standard
Zone 6	51-60	Mastery of the National Standard
Zone 7	61-70	Working at Greater Depth
Zone 8	71- 80	Working at Exceptional Standard