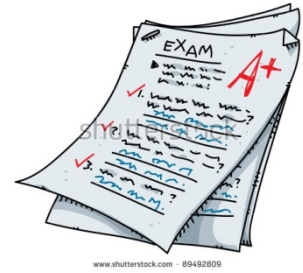


11 Plus CEM Numerical Reasoning preparation guide



Who is this guide for?

- Pupils in year 5 and year 6
- Those looking to improve their Maths skills for an 11 Plus exam
- Pupils sitting: CEM style 11 Plus exam

It is quite important that before reading this preparation guide you also read [our preparation advice for all parents](#) (hold CTRL whilst clicking link to open in a new tab) which includes advice on what sort of difficulties you can expect and how to tackle them.

Organisation

As most parents have limited knowledge of the 11 Plus the organisation of exam preparation can become challenging. Common problems that many parents face include:

- Which books to use
- Which tests to use
- What to do and when to do it
- What a parent's role should be



This guide looks at how parents should tackle these problems. We have traditionally shown parents the solution to these problems in terms of books, but have begun to see a number of specialised structured course products being produced. We believe these courses, which combine many aspects of books into a prepared course, offer a comparable alternative for parents to consider and are gaining popularity as an 11 Plus preparation technique.

Advantages of structured courses in comparison to books:

- Content is organised, saving a huge amount of time.
- Specialised courses for different exam boards, subjects and preparation lengths.
- No need to buy multiple books for revision and tests.
- Often cheaper, even taking into account printing costs.

If you wish to prepare using specialised courses we offer some advice below, however due to the complications and need for advice for preparation using books, this will form the bulk of the preparation guide.

Preparation for Numerical Reasoning using structured courses.

If you have chosen to prepare using a structured course you won't need any further help from us on how to complete your course. But with a variety of courses available you may need some help choosing the correct one for your circumstances.

The main distinction is between a full course and a subject specific course:

1. Full structured courses

We recommend three full structured courses from Learning Street, depending on the time you have available. The full courses offer coverage of all elements tested in the 11 Plus exam (Verbal Reasoning, Numerical Reasoning and Non-Verbal Reasoning, including additional work on core skills and vocabulary development). For this reason they should only be purchased if you are proposing to use a structured course as your **main** preparation method.

- If you have approximately 40 weeks to prepare, [The Complete 11 Plus Programme](#) is ideal. It offers all the work you need, comprehensively set out to gradually build core skills and exam technique over 40 parts.
- If you have approximately 20 weeks to prepare, try the [Enhance Course](#). It contains 20 parts, covering approximately 60% of the material of The Complete 11 Plus Programme, and therefore offers a more condensed option.
- The [Boost Course](#) is recommended if you have less than 20 weeks for your preparation. It contains 10 parts.



If you finish the course early and want to do some more they do produce intensive [Revision Courses](#) which would be really useful to do over the summer holidays.

2. Subject specific structured courses

If you are confident in your ability to help your child through verbal reasoning using books, or they are already advanced in this then we do recommend structured courses focusing on just numerical and non-verbal reasoning:

- The 40 part [Maths and Non-Verbal Reasoning](#) course provides the most in depth coverage.
- The 10 part [Boost Course](#) is intensive and can be completed in less than 10 weeks.

Detailed advice for families using books (to be used with our [book recommendations](#))

Before beginning our advice please note the following:

1. Our recommendations are broken down by section: core skills development, maths skills development, exam technique development and full timed maths papers.
2. We very strongly recommend you do not leap forwards to doing papers before a child is ready as although they will develop exam technique they do not develop the core understanding required for some trickier questions. Focussing primarily on papers will not help your child to improve and they are likely to simply reach a plateau and not be able to progress further.
3. The advice below is designed for children with more than 30 weeks to go until the exam, if you have less time available then see our advice at the end of the section.
4. The advice takes into account that children need spare time for other subjects e.g. Verbal Reasoning.



Step One – Core skills assessment (Week 0)

- Every 11 Plus test uses time and pressure to differentiate between children. It is vital that children have very sound core skills and can work accurately as this forms the basis for success in these tests.
- A common mistake that parents make is moving children on too quickly in terms of complexity meaning they fail to reach the right level and do not have the accuracy required.
- We have devised a test to assess whether your child's core skills are weak or strong. We urge every parent to [download the test](#) and take advantage of this free resource.
- If your child has weaker core skills they will not do well unless you work with them to help them improve these skills.



Step Two – Maths skills development phase (Weeks 1-15)

Our simple recommendation for developing core skills is regularly exercising them.

- For Mental Maths - do two pages every week ([Schofield and Sims book](#))
- For Maths problem solving - do two pages every week ([Heinemann - Maths Word Problems books](#))
- Maths skills development - do two topic areas every week. Ideally use the [CGP study book](#) and then also do one test from the [Peter Robson books](#) every week.
- Remember other areas such as verbal reasoning need to have enough focus as well.

Step Three - Exam Technique Development (Weeks 15-30)

Once you have completed the prescribed core skills work then you can start on exam papers. Do not make the mistake of doing papers too early as children simply will reach a plateau and not progress further.

We'd suggest doing the following:

- Finish the CGP ten minute tests book if you have not done so already.
- Finish the [CGP CEM Practice Papers Books](#) by doing one test every week.
- Do one full timed paper every week. Don't be tempted to do too many because you need to balance this work alongside the other areas of preparation.



Problems with timing during papers and what to do about them

- The solution to timing issues is simply to help children pace themselves effectively.
- Issues with timing can be caused by: fear of getting a question wrong, slow reading, lack of timing experience, tension and stress, amongst others.
- We believe dividing up a paper beforehand using lines to indicate time divisions and allocating a set reading time for any text is a useful technique to help children work through papers at the right pace.
- Set a time period for each division (e.g. three minutes per six questions) and indicate when the set period has elapsed whilst going through the paper.
- This should give the child an indicator of the speed they need to be working towards.

Problems with accuracy

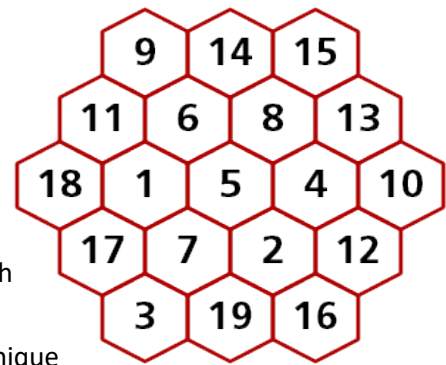
- Problems attributed to accuracy tend to be caused by sloppy working or problems with how to tackle questions.
- 'Silly' mistakes are more often than not caused by weak core skills such as times tables that can be exposed under time pressure.
- It is important that children understand why working accurately is so important or they may get stuck in the lower score percentiles.
- Going over mistakes in detail allows you to identify where your child has gone wrong and the solution to the issue can be identified.
- If a child does not understand a topic then go back to the study book and do some more focussed questions on the topic.



- If they struggle with times tables then focussing on the specific calculations is most helpful (most children have problems with the inter-relationships involving 6,7,8,9- often a child will have one they just can't get e.g. 7x6).
- If your child continues to struggle to focus on accuracy then sometimes 'bribery' works - rather than rewarding higher scores, reward accuracy. They get £5 if they make zero mistakes on questions they should have got right, take £1 away for each mistake they know they shouldn't have made.

Test paper preparation and advice

- Always set a room aside for this work, it must be done under exam conditions to get most benefit from it.
- Always try to mark work quickly and then spend enough time going through the answers.
- If timing is still an issue keep using the separation technique to set up time blocks and help children work to pace through the whole test.
- If accuracy is still an issue keep talking about it and perhaps keep the accuracy rewards system going.
- Keep encouraging your child, their confidence will be a crucial factor in the test. If they are confident they will do better.
- Keep things light-hearted and don't overwork - children who are tired, stressed or worried will underperform. Better to stop work altogether than have a worried child go into an exam and underperform by 30%.
- Keep focussing on accuracy as that will be the key differentiator in the exam.



Finally, try to understand the tests your child will face on the day. If they are going to do maths then have a half hour break and then do verbal reasoning it is a good idea, at least twice before the exam, to organise things that way at home. Many children go into the test without realising that it will be a test of stamina to some degree so it's a good idea to get them used to this beforehand.

What happens if you have more or less than 30 weeks for preparation?

If you have more than 30 weeks the temptation is to do more papers at the end. We'd suggest that the more successful approach is to spend longer on core skills work (Steps 1-3). If you do finish early and have used books then you may want to consider using a [structured revision course](#) at the end for variety. Otherwise, just doing some more papers can help although you will need to really focus on the feedback and marking to ensure you are not just going through the motions and scores haven't reached a plateau.

N.B. This guide has been developed recognising that most students will need to spend time on other areas of preparation. Please ensure you read our general guide and our guides on Verbal Reasoning and Non-Verbal Reasoning before proceeding. They will all work together to give you one unified approach whether you are using books or the new structured course approach.

If you want to stretch yourself

Some parents have children who are very mathematically able and want to stretch their child's ability. If this is you then firstly think about taking advantage of their strength in maths and spend more time on other areas of work that are less developed. Whilst you are developing other areas, it is still important to add in maths revision exercises to continue to revise core maths skills. We recommend this [structured revision course](#) as it focusses on accuracy, timed tests and adds some advanced scholarship style questions to stretch a child's ability.

