

## NOTES FOR PARENTS/GUARDIANS

### INTERPRETING SCORES ON THE DRUMCONDRA PRIMARY MATHEMATICS TEST-REVISED

#### *What is the Drumcondra Primary Mathematics Test – Revised?*

As directed by the Department of Education and Skills, starting from the 2011-2012 school year, it is a requirement for schools to assess pupils' mathematics, using standardised tests such as the *Drumcondra Primary Mathematics Test-Revised (DPMT-R)*. The DPMT-R is administered to groups of children by their class teacher, following procedures outlined in the test manual. The DPMT-R is based on objectives laid out in the 1999 *Primary Schools Mathematics Curriculum*.

The DPMT-R includes two question types.

- Multiple-choice questions consist of a question and four possible answers. The child is asked to mark the correct answer.
- Short-answer questions ask the child to write out the answer to a question.

Here are examples of multiple-choice and short-answer questions in mathematics. Children in the Third to Sixth classes are expected to work on questions like these on their own.

Multiple-Choice Question	Short-Answer Question
Mark the number that goes in the box. $50 \times 20 = \square$ A. 100 B. 1000 C. 10 000 D. 50 000	It takes Paula half an hour to paint 10m of fence. How many metres does she paint in $2\frac{1}{2}$ hours?  <input type="text"/>

#### *What do the test scores mean?*

In developing the DPMT-R, the test was administered to nationally-representative samples of about 2000 children at each class level. The results were used to develop test norms. The test norms allow teachers to compare the performance of an individual pupil in their class with that of other pupils nationally at the same class level.

The results of standardised tests may be reported in terms of Raw Scores, Standard Scores, Sten Scores, or Percentile Ranks.

The **Raw Score** corresponds to the number of questions answered correctly by the child. Thus, on a test of 60 questions, a raw score of 30 means that the child answered half of the questions correctly.

In standardising a test, Raw Scores are transformed to **Standard Scores** (sometimes called Scale Scores). Standard Scores tell you the position of a child relative to other

children nationally. On most standardised tests, the average Standard Score is set at 100. The following table may be helpful in interpreting standard scores. It provides a descriptor for scores in each of several score ranges, and also indicates how the performance of a child may be interpreted relative to other children in the norm group.

Standard Score Range	Descriptor	Achievement - Nationally
115 and above	Well above average	Top one-sixth of pupils
108-114	High average	One-sixth of pupils
93-107	Average	Middle one-third of pupils
85-92	Low average	One-sixth of pupils
84 and below	Well below average	Bottom one-sixth of pupils

Thus, a Standard Score of 118 is considered to be ‘well above average’, and indicates a strong performance on a test. Fewer than one-sixth of children achieve a score that is this high or higher. A Standard score of 75 is in the ‘well below average’ range, and indicates a poor performance. Fewer than one sixth of children achieve scores in the ‘well below average’ range.

Performance on standardised tests may also be reported in terms of a **Sten Score**. These scores are on a scale of 1 to 10. The following table may be useful in interpreting Sten Scores:

Sten Score Range	Descriptor	Achievement - Nationally
8-10	Well above average	Top one-sixth of pupils
7	High average	One-sixth of pupils
5-6	Average	Middle one-third of pupils
4	Low average	One-sixth of pupils
1-3	Well below average	Bottom one-sixth of pupils

Thus, a Sten Score of 2 indicates that a child performed ‘well below average’ on the test relative to other children at the child’s class level nationally. A Sten Score of 5 indicates that the child achieved a score in the ‘average range’, while a Sten Score of 9 indicates a ‘well above average’ performance on the test.

Finally, a child’s score may be reported in terms of a **Percentile Rank**. If a child achieves a Percentile Rank of 40, it means that the child achieved a score on the test that was the same as, or better than, 40% of children nationally and lower than 60% of children nationally. Similarly, a Percentile Rank of 70 means that the child did as well as, or better than, 70% of children nationally and less well than 30% of children nationally.

***How accurate are achievement test scores?***

Unfortunately, there is error associated with all test scores. A child's test score, whether a Raw Score, Standard Score, Sten Score or Percentile Rank, is an estimate of his/her true score. If a child achieves a Standard Score of 115, it indicates that the child's true score is probably in a range or band of scores around 115. For example, we might say that there is a 68% chance that the child's 'true' score falls in the range 112 to 118. This means that your child's score on a test such as the DPMT-R is an estimate of his/her 'true' achievement rather than a very precise measure. It also implies that small differences between scores are probably not meaningful.

***What should I do if my child gets a low score?***

Some children will achieve low scores on the DPMT-R. Since it is a norm-referenced test, about one-sixth of children will achieve scores that are in the 'well below average' range. These include Standard Scores that are below 85, and Sten Scores between 1 and 3. If your child achieves a low score, you should discuss this with your child's teacher. First, find out if the low score reflects your child's performance in class. If it does, it may be appropriate to explore ways in which your child's below average performance can be addressed. This may entail additional diagnostic testing by the school to pinpoint specific strengths and weaknesses in mathematics, and the provision of extra support at home and/or at school.