



MATHEMATICS DIAGNOSTIC ASSESSMENT

Grade 1 to 7: Paper Version

Brombacher and Associates cc

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www.GeoGenius.co.za

NumberSense



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Description

The Grade 1 – 7 Mathematics Diagnostic tool (developed and distributed under license to Brombacher and Associates) is an assessment that has been developed to assist teachers and schools in determining the grade equivalent mathematics performance levels for students in Grades 1 to 7. Typically the teacher (school) will administer this assessment to students that have been identified as being in need of remedial support in mathematics. In a typical application, it is not envisioned that each child in a class would complete the assessment.

- The assessment assesses performance on a range of foundational skills that are predictive of future success in mathematics. Each skill is assessed at a range of developmental levels.
- The student is assigned an initial set of questions for the first skill based on their age. After responding to the items and based on their performance, the student is either directed to an easier set of items (if the initial set proved to be too demanding), a harder set of items (if the initial set proved to be too accessible), or to the next skill if the student's performance suggested that items were at the ideal developmental level. The student progresses through the different skills in this way until they reach the last skill.
- On completion of the assessment the student is assigned to a grade equivalent developmental level based on their dominant performance level across the skills. Knowing the grade equivalent developmental level of the child will enable the teacher to provide targeted remedial support to the student.
- The assessment can either be administered as an oral assessment by the teacher, or digitally on the JumpCo JumpTrak platform.
- The instrument is in a first draft format that still needs validation. In order to enable the developers to validate the instrument, it is being made available for use at no charge for a limited time. During this period users (teachers and schools) may use the instrument with the understanding that: (a) the results give a good approximation of a student's developmental level; (b)

the developer may use the data collected to refine the tool; and (c) the results produced by a newer version may differ from those produced on this version.

How to use the paper version of the Mathematics Diagnostic tool for Grades 1 to 7

Step 1: Identify the students who will complete the assessment

As already indicated there is no expectation that all students in a class/school will complete the assessment – only those identified by the teacher as needing remedial support.

Step 2: Download the Diagnostic Assessment relevant to the student's age

1. Download the age-appropriate Diagnostic Assessment Stimulus Card
2. Download the age-appropriate Diagnostic Assessment Recording Sheet (you will need one sheet per student as this is where you track and record their progress)

Step 3: Administer the assessment

Step 4: Teacher reviews student performance

Interpreting the student's results: For each skill, select the level at which the student ended on that skill by placing a tick in the appropriate box:

- Skill 1 Counting Objects
- Skill 2 Comparing Numbers
- Skill 3 Number Patterns
- Skill 4 Formulae
- Skill 5 Solving Equations
- Skill 6 Write the Rule
- Skill 7 Geometry

2. To determine the overall level:

- a. Select the level with the greatest number of ticks.
- b. If more than one level has the same (largest) number of ticks, select the lower level.
- c. If student struggles at their initial level, administer the Diagnostic Assessment Tool for the previous age group. If a student excels at their initial level, administer the Diagnostic Assessment for the next age group.

Please submit comments and questions to: info@brombacher.co.za