



## MATHS ASSESSMENT

**Penelope**

**DATE: 30<sup>th</sup> September 2024**

### **Background**

The purpose of our assessment is twofold. Firstly, we look to identify each student's level in relation to their age. Secondly, we look to identify suitable areas for further study to improve each student's mathematical knowledge. At Arka, our learning plans are tailored to each student's strengths and weaknesses as well as their specific goal (e.g. if a student is approaching 11+ we will ensure specific exam preparation is included as appropriate).

It is worth noting that for both purposes this assessment is just the starting point. At Arka, we pride ourselves on devising programmes that continually assess students and adapt to their specific needs. As we develop a more comprehensive understanding of each child's level and areas for development, we continually update each child's learning plan to ensure we are maximising the impact of their time in our centre.

Our Maths assessment is made up of an initial verbal assessment as well as a written assessment. The verbal assessment looks to establish how students think and reason mathematically. It allows us to see not only if students know the right answer but how they get to that answer and their level of understanding as to **why** problems are solved in the way they are. Our written assessment allows us to see how students can perform on a range of different calculations and topic areas.

### **Verbal Assessment**

Our verbal assessment was split into two parts and my comments are as follows.

#### Introductory Addition and Subtraction

Penelope worked slowly through the verbal assessment but was able to correctly answer a few questions. She did however struggle on questions as the numbers got larger or were more complexly worded.

#### Introductory Multiplication and Division

The introductory Multiplication and Division assessment is sat by children in Key Stage 2. It is used to identify any misconceptions and inefficiencies that children have when working to multiply. We decided not to go forward with this part of the assessment.

### **Written Assessment**

Penelope sat paper 1 of our Year 2 assessment. This tests all prior knowledge from Year 1.

**Scores:**

Overall score: 62%

Achievement By Cognitive Domain

Knowing 75%



Applying 67%



Reasoning 20%



Achievement By Content Domain

Number 80%



Addition and subtraction 44%



Multiplication and division 100%



Geometry, measures, statistics 75%



Fractions, decimals, percentage, ratio 50%



**Comments:**

Penelope completed a Year 2 paper, which primarily tests Year 1 knowledge, and achieved a score of 62%. This indicates that she is currently performing below the expected level for her age group, although she displayed some strengths in specific areas. A notable highlight was her performance in multiplication and division, where she achieved 100%, though it's important to mention that this was based on a single question. Throughout the assessment, Penelope demonstrated a good grasp of basic number work and showed promise in geometry, measures, and statistics. However, her scores suggest that there may be gaps in applying and reasoning skills, particularly in areas such as addition, subtraction, and fractions.

Penelope did well when focused, but there were times when she seemed to lose focus or rush through questions, which led to mistakes. A structured approach with a focus on foundational skills will help her to reach the expected level.

**Recommended Study Programme:**

Moving forward, Penelope will benefit from focusing on reinforcing her understanding of key concepts, particularly addition and subtraction, fractions, and decimals. Strengthening these fundamental areas will build her confidence and help her develop more consistent reasoning skills. Daily practice in breaking down problems and explaining her reasoning will also support her in avoiding unnecessary mistakes. Continuing to work on geometry and measures should be encouraged to build on her strengths. As Penelope has demonstrated a strong foundation in multiplication and division, introducing more challenging multi-step problems in this area could be beneficial to deepen her understanding.