

## Class 1 Progress Sample

Name of the child : \_\_\_\_\_

**\*This test is designed to identify the progress of children in some sample concepts.**

**For each competency questions A and B are of the same difficulty level, and question C is of the higher difficulty level.**

**Baseline :** For each competency we ask question A. We record his / her response in baseline A record.

**Endline :** We test for these sample competencies again after the six months of Manchadi math lab experience.

**For each question do the following :**

**If the child could not do question A independently or was not liking it at time of baseline, give question B. Record the response in Endline B record. Also give question C which is of a higher difficulty level. Record the response in Endline C record.**

**If the child could do question A correctly at the time of baseline, give him only question C at the time of endline.**

*If at the time of baseline, the child is already above the level of endline question, this cannot be captured in this test. We can say that the child is at or above the expected level.)*

**While designing the assessment questions the following principles are followed –**

- Children should not face questions about concepts that they are not familiar with. They should not be asked on things that they have not heard of. Therefore the curriculum of previous class was taken as the base for each class.
- For class 1, no curriculum is assumed to be done.
- As far as possible the child will not be left with a feeling of failure. If the child cannot do the task herself, the assessor will help a bit. For every question what help can be extended (and what not) gets discussed with the assessment team. The outcome will be recorded as 'could do with help' if the child could do it. Only in exceptional cases children cannot do at all. Feeling of failure in doing math creates the fear of math. Our assessment should not give that feeling ever.

| Activity /Question No. | Baseline question/Activity (A)   | Baseline (A) - Record<br>(You may tick more squares)  | Endline question/activity (B) | Endline B record | End line question/activity (C)   | Endline (C) Record  |
|------------------------|--|---|-------------------------------|------------------|--|---|
| <b>About Q 1.</b>      | Give Rangometry. Ask the child to make a picture. Ask her what he/she has made. Children should be looking at reality around them. Linking real life objects to geometric shapes (e.g. using a triangle for the roof) is the first stage mathematization of the reality. |   |                               |                  |  |   |
| 1                      | Give Rangometry. Ask the child to make a picture. Ask her what he/she has made. <i>(This description will connect the context)</i>   | <b>Approach</b><br>Enthusiastic <input type="checkbox"/><br>Engrossed <input type="checkbox"/><br>Comfortable <input type="checkbox"/><br>Little awkward <input type="checkbox"/><br>Didn't want to do <input type="checkbox"/><br><b>Outcome</b> | -                             | -                | Give Rangometry. Ask the child to make a picture. Ask her what he/she has made. <i>(This description will connect the context)</i> | <b>Approach</b><br>Enthusiastic <input type="checkbox"/><br>Engrossed <input type="checkbox"/><br>Comfortable <input type="checkbox"/><br>Little awkward <input type="checkbox"/><br>Didn't want to do <input type="checkbox"/><br><b>Outcome</b> |

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|                   | Take a photograph of each child's picture.   | Made a picture with less than 5 pieces <input type="checkbox"/><br>Made a picture with more than 5 pieces <input type="checkbox"/><br>Described what she has made <input type="checkbox"/><br>Did not describe <input type="checkbox"/> |   |  | Take a photograph of each child's picture   | Made a picture with less than 5 pieces <input type="checkbox"/><br>Made a picture with more than 5 pieces <input type="checkbox"/><br>Described what she has made <input type="checkbox"/><br>Did not describe <input type="checkbox"/> |
| <b>About Q. 2</b> | <p>'how many fingers do you have on your one hand. Ask the child 'how many fingers and toes do you have?'</p> <p>Naturally we have groups of 5 with us in the form of fingers and toes. This question tests whether children answer this without counting. It tells us whether the structure of 5 is getting reinforced in their mind.</p> |   |   |  |   |   |
| <b>2</b>          | Ask the child 'how many fingers do you have on your one hand. Help her to count if necessary.  | Could answer without counting <input type="checkbox"/><br>Could answer by counting <input type="checkbox"/><br>Could not answer <input type="checkbox"/>  | Ask the child 'how many fingers do you have on your one hand. Help her to count if necessary. | Could answer without counting <input type="checkbox"/><br>Could answer by counting <input type="checkbox"/><br>Could not answer <input type="checkbox"/> | Ask the child 'how many fingers and toes do you have? Help her to count if necessary. | Could answer without counting <input type="checkbox"/><br>Could answer by counting <input type="checkbox"/><br>Could not answer <input type="checkbox"/>  |
| <b>About Q.3</b>  | <p>Sorting shapes by applying 1,2 and 3 criteria.</p> <p>Sorting is a foundational skill for math learning. This question tests whether the child can pick up right pieces as per the criteria of colour, shape and size. It also tells us whether they can identify shapes.</p>   |   |   |  |   |   |

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| 3         | Give Akar Pariwar shapes of mixed colours and shapes. Ask each child to sort out shapes of one colour. (red for child 1, green or child 2, etc)   | <b>Approach</b><br>Enthusiastic <input type="checkbox"/><br>Engrossed <input type="checkbox"/><br>Comfortable <input type="checkbox"/><br>Little awkward <input type="checkbox"/><br>Didn't want to do <input type="checkbox"/><br><b>Outcome</b><br>Could sort without help <input type="checkbox"/><br>Could sort with help <input type="checkbox"/><br>Could not sort <input type="checkbox"/> | Give Akar Pariwar shapes of mixed colours and shapes. Ask each child to sort out shapes of one colour. (red for child 1, green or child 2, etc) | <b>Approach</b><br>Enthusiastic <input type="checkbox"/><br>Engrossed <input type="checkbox"/><br>Comfortable <input type="checkbox"/><br>Little awkward <input type="checkbox"/><br>Didn't want to do <input type="checkbox"/><br><b>Outcome</b><br>Could sort without help <input type="checkbox"/><br>Could sort with help <input type="checkbox"/><br>Could not sort <input type="checkbox"/> | Give Akar Pariwar shapes of mixed colours and shapes. Ask each child to sort out specific shape of specific colour and size. (small red circle for child 1, big green square for child 2, etc) | <b>Approach</b><br>Enthusiastic <input type="checkbox"/><br>Engrossed <input type="checkbox"/><br>Comfortable <input type="checkbox"/><br>Little awkward <input type="checkbox"/><br>Didn't want to do <input type="checkbox"/><br><b>Outcome</b><br>Could sort without help <input type="checkbox"/><br>Could sort with help <input type="checkbox"/><br>Could not sort <input type="checkbox"/> |
| About Q.4 | "Show these many fingers" - Translation from numeral to fingers – from math language to real life quantity. Here we record whether the child did is without counting or with counting. The child having stronger number sense will show it without counting. Children will use visual image of numbers. |   |   |   |  |   |
| 4.        | Show a card of number 4. Don't read the number. Ask the child to show those many fingers.   | Showed fingers without counting <input type="checkbox"/><br>Showed fingers by counting <input type="checkbox"/>   | Show a card of number 4. Don't read the number. Ask the child to show those many fingers.   | Showed fingers without counting <input type="checkbox"/><br>Showed fingers by counting <input type="checkbox"/>   | Show a card of number 7, 8 or 9. Don't read the number. Ask the child to show those many fingers.  | Showed fingers without counting <input type="checkbox"/><br>Showed fingers by counting <input type="checkbox"/>   |
| About Q.5 | "Clap these many times" – Translation from numeral to claps. In Q.4 children can use visual image. In the case of claps counting becomes must. (because the earlier claps don't remain with them).  |   |   |   |  |   |

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| 5.                | Show a card of number 7, 8 or 9. Don't read the number. Ask the child to clap those many times.   | Could clap <input type="checkbox"/><br>Could not clap <input type="checkbox"/>   |  |  | Show a card of number 7, 8 or 9. Don't read the number. Ask the child to clap those many times.             | Could clap <input type="checkbox"/><br>Could not clap <input type="checkbox"/>   |
| <b>About Q. 6</b> | Mental jumping – Being able to count 8 objects and being able to 'see' 8 objects when arranged in patterns are two different skills. The latter is a more advanced and much needed skill for mental math. Visual recognition of numbers is being tested in this question. |  |  |  |   |  |
| 6.                | Show 4 manchadis or blocks in one fist. Show it for a moment while you say 'How many' and close the fist. Do not give time to count.  | Could answer at a glance <input type="checkbox"/><br>Could answer when shown again for a longer time <input type="checkbox"/><br>Could not answer <input type="checkbox"/> | Show 4 manchadis or blocks in one fist. Show it for a moment while you say 'How many' and close the fist. Do not give time to count. | Could answer at a glance <input type="checkbox"/><br>Could answer when shown again for a longer time <input type="checkbox"/><br>Could not answer <input type="checkbox"/> | Show bindi card of number 8 for a moment while you say 'How many'. Take it away. Do not give time to count. | Could answer at a glance <input type="checkbox"/><br>Could answer when shown again for a longer time <input type="checkbox"/><br>Could not answer <input type="checkbox"/> |
| <b>About Q. 7</b> | Counting objects – Children have to know number names in sequence. One to one correspondence of the finger touching the object and the words 'one, two..' have to match. Here we test upto which number the child is comfortable.   |  |  |  |   |  |
| 7.                | Ask the child to count beads on a number line of beads. (You may ask her to count chairs put in a row,  | Counted correctly upto number _____  | -  | -  | Ask the child to count beads on a number line of beads. (You may ask her to count chairs put in a row,      | Counted correctly upto number _____  |

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|                   | or tiles of the floor or children sitting in a row or anything that is organised in a line. More than 50 objects)  |   |   |   | or tiles of the floor or children sitting in a row or anything that is organised in a line. More than 50 objects) |   |
| <b>About Q. 8</b> | We test approach of the child to puzzles. The puzzles are graded as per the difficulty level. Approach to problem solving, understanding of basic shapes, logic and visualization gets tested in this problem. |   |   |   |   |   |
| 8.                | Give a picture made of two pieces of tangram. Ask the child to make that shape.  | <b>Approach</b><br>Enthusiastic <input type="checkbox"/><br>Engrossed <input type="checkbox"/><br>Comfortable <input type="checkbox"/><br>Little awkward <input type="checkbox"/><br>Didn't want to do <input type="checkbox"/> | Give a picture made of two pieces of tangram. Ask the child to make that shape. | <b>Approach</b><br>Enthusiastic <input type="checkbox"/><br>Engrossed <input type="checkbox"/><br>Comfortable <input type="checkbox"/><br>Little awkward <input type="checkbox"/><br>Didn't want to do <input type="checkbox"/> | Give a picture made of four pieces of tangram. Ask the child to make that shape.                                  | <b>Approach</b><br>Enthusiastic <input type="checkbox"/><br>Engrossed <input type="checkbox"/><br>Comfortable <input type="checkbox"/><br>Little awkward <input type="checkbox"/><br>Didn't want to do <input type="checkbox"/> |
|                   |  | <b>Outcome</b><br>Used correct shapes and made a correct picture <input type="checkbox"/><br>Used correct shapes but the picture is not correct <input type="checkbox"/>  |   | <b>Outcome</b><br>Used correct shapes and made a correct picture <input type="checkbox"/><br>Used correct shapes but the picture is not correct <input type="checkbox"/>  |   | <b>Outcome</b><br>Used correct shapes and made a correct picture <input type="checkbox"/><br>Used correct shapes but the picture is not correct <input type="checkbox"/>  |

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|             |  | Shapes and picture not correct <input type="checkbox"/>   |  | Shapes and picture not correct <input type="checkbox"/>   |  | Shapes and picture not correct <input type="checkbox"/>   |
| About Q. 9  | The concept of identical gets tested here. It is one of the important concepts in learning math. Identifying identical pictures, numerals etc is easier than constructing identical shape. So, the skill is being tested at a higher level.                                      |   |  |   |  |   |
| 9.          | Give a shape made of 4 Jodo blocks. Ask her to make the same shape using same colours.   | <b>Approach</b><br>Enthusiastic <input type="checkbox"/><br>Engrossed <input type="checkbox"/><br>Comfortable <input type="checkbox"/><br>Little awkward <input type="checkbox"/><br>Didn't want to do <input type="checkbox"/><br><b>Outcome</b><br>Could do without help <input type="checkbox"/><br>Could do with help <input type="checkbox"/><br>Could not do <input type="checkbox"/> | Give a shape made of 4 Jodo blocks. Ask her to make the same shape using same colours. | <b>Approach</b><br>Enthusiastic <input type="checkbox"/><br>Engrossed <input type="checkbox"/><br>Comfortable <input type="checkbox"/><br>Little awkward <input type="checkbox"/><br>Didn't want to do <input type="checkbox"/><br><b>Outcome</b><br>Could do without help <input type="checkbox"/><br>Could do with help <input type="checkbox"/><br>Could not do <input type="checkbox"/> | Give a shape made of 6 Jodo blocks. Ask her to make the same shape using same colours.     | <b>Approach</b><br>Enthusiastic <input type="checkbox"/><br>Engrossed <input type="checkbox"/><br>Comfortable <input type="checkbox"/><br>Little awkward <input type="checkbox"/><br>Didn't want to do <input type="checkbox"/><br><b>Outcome</b><br>Could do without help <input type="checkbox"/><br>Could do with help <input type="checkbox"/><br>Could not do <input type="checkbox"/> |
| About Q. 10 | Understanding that a number can be made in different ways and being able to make it. Upto 5, it can be done with 'fingers of both hands'. Beyond that we use blocks of two colours. Knowledge of two parts of a number is tested which children make a number in different ways. |   |  |   |  |   |
| 10          | Ask the child to show number 5 using fingers of both hands. Ask  | Could show without help <input type="checkbox"/><br>Could show with help <input type="checkbox"/><br>Could not show <input type="checkbox"/>  | Ask the child to show number 5 using fingers of both hands. Ask                        | Could show without help <input type="checkbox"/><br>Could show with help <input type="checkbox"/>   | Ask the child to show number 8 by joining Jodo blocks of two colours in all possible ways. | Could show without help <input type="checkbox"/><br>Could show with help <input type="checkbox"/><br>Could not show <input type="checkbox"/>  |

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|  | her to show it in a different way. |  | her to show it in a different way. | Could not show <input type="checkbox"/> |  |  |
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Special note at the time of baseline :

Special note at the time of endline :