

Student Name: Noah
Class: 4r 2 2015
Age: _____ D.O.B: _____

1st _____
2nd Dec 2015

Task	Possible response & comments	Level
Aspect 2 Early Arithmetic Strategies Task 1 <div> <i>I had 8 cards and I was given another 7.</i> <i>How many do I have now?</i> </div> <div> $2 + 10 + 5 = 15$ </div> Task 2 <div> <i>I have 17 grapes. I ate some and now I have 11 left. How many did I eat?</i> </div> <div> <i>'already knew it' started at 17?</i> </div> Note: Teacher may like to ask throughout the assessment <i>How did you work that out?</i> Or <i>What number did you start with?</i>	Student: <ul style="list-style-type: none"> Counts from one using fingers Counts from one to find the answer Counts on from highest number Uses a known fact ($8 + 5 = 13 + 2 = 15$, $7 + 7 = 14 + 1 = 15$, $8 + 8 = 16 - 1 = 15$) Counts from one using fingers Counts from one to find the answer Counts on from smallest number to highest number Counts down from highest number to smallest number Uses a known fact ($17 - 10 = 7 - 1 = 6$, $10 + 7 = 17$ so $11 + 6 = 17$) Uses other non-count-by-one strategies OTHER RESPONSES	EAS Level 2 - Figurative Level 2 - Figurative Level 3 - Counting-on-and-back Level 4 - Facile (flexible)
Aspect 1 Numeral Identification Tasks 3 – 12 <div> 90 ✓ 59 ✓ 101 ✓ 400 ✓ 263 ✓ 607 ✓ 310 ✓ 1000 ✓ 4237 ✓ 3060 ✓ </div>	Student: <ul style="list-style-type: none"> Knows all numbers 1 – 100 Knows all numbers 1 – 1000 Knows numbers greater than 1000 	Numeral Id Level 3 - (0 – 100) Level 4 - (0 – 1000) Level 5 - (> 1000)
Aspect 1 Counting by 10s and 100s Tasks 13 – 16 <i>Start from 110 and count backwards by 10s. I'll tell you when to stop.</i> <div> $110, 100, 90, \dots, 50$ </div> <i>Start from 7 and count forwards by 10s. I'll tell you when to stop.</i> <div> $7, 17, 27, \dots, 97$ </div> <i>Start from 924 and count backwards by 100 each time.</i> <div> $924, 824, 724, \dots, 524$ </div> <i>Start counting from 367 and count forwards by 10s</i> <div> $367, 377, 387, \dots, 417$ </div>	Student: <ul style="list-style-type: none"> Counts on by tens but cannot count backwards Counts backwards by 10s from 110 (Task 13) Counts forwards and backwards by tens, off the decade (Tasks 13 and 14) Counts forwards and backwards by hundreds, off the hundreds and by 10s off the decade (Tasks 15 and Task 16) OTHER RESPONSES	Counting by 10s and 100s Level 0 Level 1 Level 2 Level 3

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Aspect 3 Pattern and Number Structure Part-whole to 10 and 20 Task 17 <div> Can you tell me two numbers that add up to 10? ✓ Tell me two other numbers that add up to 10. Can you tell me another two numbers that add up to 10? ✓ </div> Task 18 <div> Can you tell me two different numbers that add up to 19? ✓ Can you tell me another two? </div>	Student: <ul style="list-style-type: none"> Says 5 + 5 but does not recall other combinations ✓ Says 5 + 5 and recalls other combinations to 10 (does not need to count on to find answer) but is unable to provide combinations for 20 <p>5+5 3+7 9+1</p> <ul style="list-style-type: none"> Recalls standard and non-standard combinations for 10 and 20 (5 + 5, 9 + 1, 8 + 2 etc. 10 + 9, 9 + 10, 18 + 1, 15 + 4 etc.) <p>9+10 6+13</p> OTHER RESPONSES	Part-whole to 10 Level 4 - Part-whole to 10 Level 4 - Part-whole to 10 Part-whole to 20 Level 5 - Part-whole to 20
Aspect 4 Place Value Task 19 Uncovering task Cover the card with two sheets of cardboard. <ul style="list-style-type: none"> Uncover the first 4 dots <p>How many dots are there?</p> <ul style="list-style-type: none"> Slide both covers to the right so that the 4 dots and the next 10 dots are visible. <p>Each time you see one of these dot strips, you know that it has 10 dots.</p> <p>How many dots can you see now, including these 4 dots?</p> <ul style="list-style-type: none"> Slide both covers to the right so that the 14 dots and the next 20 dots are visible. <p>How many dots can you see now?</p> <ul style="list-style-type: none"> Slide one cover to the left to cover the 34 dots. Slide the second cover to the right so that the next 14 dots are visible. <p>How many dots are there altogether, including the ones under here?</p> <ul style="list-style-type: none"> Slide one cover to the right to cover all the dots. Slide the second cover to the right so that the last 25 dots are visible. <p>How many dots are there altogether now, including the ones under here? (Point to the covered dots)</p> <ul style="list-style-type: none"> Cover all the dots <p>How many more dots do I need to make 100?</p>	Student: <ul style="list-style-type: none"> Counts the dots by ones Counts 4, 14 and then counts by ones Counts 4, 14, 34, 44, 48, 58, 68, 69, 70, 71, 72, 73 but is unable to solve how many more dots to make 100 Counts 4, 14, 34, 40, 48, 53, 63, 73 but is unable to solve how many more dots to make 100 Counts by tens to solve uncovering task and solves $73 + \square = 100$ by counting by ones Counts 4, 14, 34, 48, 58, 68, 73 and then 83, 93 and 7 is 27 more to make 100 Counts by tens in uncovering task 30 is 100 so answer is 27 Counts by tens and solves $73 + \square = 100$ mentally OTHER RESPONSES <p>visible dots</p> <p>said 14 then 48, 73</p> <p>27</p> <p>thinking - counting? adds 10 then says 35, 36, 37, 38</p>	Place Value Level 0 - Ten as a count Level 0 - Ten as a count Level 1 - Ten as a unit Level 1 - Ten as a unit Level 1 - Ten as a unit Level 2 - Tens and ones Level 2 - Tens and ones Level 2 - Tens and ones

73 + 7 = 80 + 20 = 100

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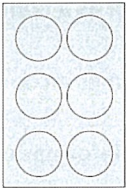
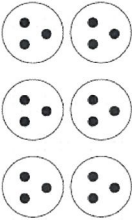
2nd _____

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Aspect 4 Place Value Task 20 Display this card <div style="border: 1px solid black; padding: 5px; display: inline-block;">43 + 21</div> <div style="margin-left: 20px; font-size: 2em;">64</div> <i>What is the answer to this?</i> <i>How did you work that out?</i> Note: If student says 'I added the 4 and the 2' ask student <i>What does the 4 represent?</i> (Does the student understand that the '4' represents '40')	Student: <ul style="list-style-type: none"> Counts from one Counts on from 21 using fingers to keep track Counts on from 43 using fingers to keep track Mentally duplicates written algorithm Adds tens then units (43, 53, 63, 64) Separates and combines left to right (40 and 20 is 60; 3 and 1 is 4 so answer is 64) Other mental strategy <div style="text-align: center;"> $40 + 20 = 60$ $3 + 1 = 4$ \swarrow 64 </div> OTHER RESPONSES	Place Value Level 0 - Ten as a count Level 0 - Ten as a count Level 0 - Ten as a count Need more information Level 2 - Tens and ones Level 2 - Tens and ones Level 2 - Tens and ones
Aspect 4 Place Value Task 21 Display this card <div style="border: 1px solid black; padding: 5px; display: inline-block;">37 + 19</div> <div style="margin-left: 20px; font-size: 2em;">56</div> <i>What is the answer to this?</i> <i>How did you work that out?</i> Note: If student says 'I added the 3 and the 1' ask student <i>What does the 3 represent?</i> (Does the student understand that the '3' represents '30')	Student: <ul style="list-style-type: none"> Counts from one Counts on from 37 Mentally duplicates written algorithm Adds tens then units (37, 47, and 9 is 56) Uses split strategy: 30 and 10 is 40; 7 and 9 is 16 so answer is 56 <i>Reverse</i> Compensates: adds 1 to 19 and subtracts 1 from 37 Adds 20 to 37 and subtracts 1 from answer <div style="text-align: center;"> $9 + 7 = 16$ $30 + 10 = 40$ \swarrow 56 </div> OTHER RESPONSES	Place Value Level 0 - Ten as a count Level 0 - Ten as a count Need more information Level 2 - Tens and ones Level 2 - Tens and ones Level 2 - Tens and ones Level 2 - Tens and ones
Aspect 4 Place Value Task 22 Display this card <div style="border: 1px solid black; padding: 5px; display: inline-block;">50 - 27</div> <i>What is 50 minus 27?</i> <i>How did you work it out?</i>	Student: <ul style="list-style-type: none"> Counts on from 27 by ones using fingers as markers Counts down from 50 by ones using fingers as markers Mentally duplicates written algorithm Adds tens then units (27, 37, 47, 48, 49, 50 so answer is 23) Separates and combines left to right (50 minus 20 is 30; 30 minus 7 is 23) 50 minus 25 is 25 and 2 less is 23 Other mental strategy <div style="text-align: center;"> 33 quick response <i>self corrects</i> $50 - 20 = 30 - 7 = 23$ </div> OTHER RESPONSES	Place Value Level 0 - Ten as a count Level 0 - Ten as a count Need more information Level 2 - Tens and ones Level 2 - Tens and ones Level 2 - Tens and ones Level 2 - Tens and ones

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Aspect 5 Multiplication and division Task 23 <p>Present randomly spaced counters, more than 12, to the student.</p> <p><i>Using these counters, can you make three rows of four?</i></p> <p><i>How many counters are there altogether?</i></p>	Student: <ul style="list-style-type: none"> Cannot make equal rows Counts all items by ones (does not pay attention to row structure) Counts items using rhythmic or skip counting <p>The following levels may need to be confirmed using further tasks that involved concealed items</p> <ul style="list-style-type: none"> Counts items in multiples of four (without paying attention to the counters) Counts items by fours (uses fingers to keep track of count) Uses multiplication (states answer 12, three groups of four are 12 or 3 fours are 12) <p><i>12</i> OTHER RESPONSES <i>may be skip counting</i></p>	Multiplication and division Level 0 - Learning to make equal groups Level 1 - Forming equal groups Level 2 - Perceptual multiples Level 3 - Figurative units Level 4 - Repeated abstract units Level 5 - Multiplication and division as operations
Aspect 5 Multiplication and division Task 24 <p>Without the student seeing, place a blank sheet of paper over the 6 circles sheet with the dots in circles side face down on the table.</p>  <p><i>There are 6 circles on this paper. There are three dots on each of the circles.</i></p> <p><i>How many dots altogether?</i></p>  <p>Reveal circles if student cannot complete task</p>  <p>Reveal the circles with dots if student cannot complete task</p>	Student: <p>Does not need to see circles or dots</p> <ul style="list-style-type: none"> Uses multiplication e.g. 6 threes are 18 <p><i>flexible strategy.</i></p> <ul style="list-style-type: none"> Says multiples 3, 6, 9, 12, 15, 18 (uses fingers to keep track of count) <p>May need to see circles</p> <ul style="list-style-type: none"> Says multiples 3, 6, 9, 12, 15, 18 (needs to represent all fingers at once to represent groups before beginning the count) <p>Needs to see circles with dots</p> <ul style="list-style-type: none"> Counts by ones (does not pay attention to group structure) Rhythmic counts by threes (1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18) <p><i>3+3+3=9 and 9+9=18</i></p> <p>OTHER RESPONSES</p>	Multiplication and division Level 5 - Multiplication and division as operations Level 4 - Repeated abstract units Level 3 - Figurative units Level 1 - Forming equal groups Level 2 - Perceptual multiples

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Aspect 5 Multiplication and division Task 25 <p><i>There are 12 biscuits and I give some children two biscuits each. How many children are there?</i></p>	Student: <ul style="list-style-type: none"> Uses multiplication. Answer 24 Puts ten fingers up in an attempt to make 12 then counts by twos Counts by twos up to 12 (uses fingers to keep track of count) Answer is 6 Relates multiplication fact to division e.g. 12 divided by two is six <p><i>may need further tasks to develop fluency with multiples</i></p> <p>OTHER RESPONSES 6 5 groups of 2 = 10 then another group is 12</p>	Multiplication and division No Level Level 3 - Figurative units Level 4 - Repeated abstract units Level 5 - Multiplication and division as operations
Aspect 5 Multiplication and division Task 26 <p>Display this card</p> <p><i>The dots on this card are in rows and columns. Briefly show the complete array, then cover.</i></p> <p><i>Some of the dots are covered. How many dots are there altogether?</i></p> 	Student: <ul style="list-style-type: none"> Counts only the visible dots Counts all the dots, including hidden dots, by ones Starts with five and counts in multiples of 5 or, starts with seven and counts in multiples of 7 (pointing at the visible dots as group markers as they count) Counts by fives or counts by sevens (uses fingers to keep track of the groups as they count) Recognises that the answer is 35, e.g. 5 x 7 or 7 x 5 <p><i>35 5, 10, 15, 20, 25, 30, 35</i></p> <p>OTHER RESPONSES</p>	Multiplication and division Level 1 - Forming equal groups Level 3 - Figurative units Level 3 - Figurative units Level 4 - Repeated abstract units Level 5 - Multiplication and division as operations

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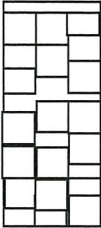
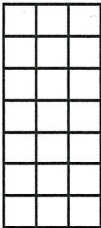
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Aspect 5 Multiplication and division Task 27(a) Display this card <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;">8 x 4</div> What is the answer to this? If the student is correct, ask part (b) Task 27(b) Display this card <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;">32 ÷ 4</div> If the answer to that question is 32, what would 32 divided by four equal? Task 27 (c) Display this card <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;">9 x 4</div> If you know the answer to this (point to 8 x 4 card), what is the answer to this?	Student: <ul style="list-style-type: none"> Counts in multiples of four or eight (needs to represent all fingers at once to represent groups before beginning the count) Counts in multiples of four or eight (uses fingers to keep track of the groups as they count) Adds 8 and 8 is 16 and 16 more is 32 (doubling) Uses multiplication <p>36 8+8=16 16+16=32</p> <p>OTHER RESPONSES</p> <p>32 correct answer</p> <ul style="list-style-type: none"> Uses relationship between division and multiplication Starts at four and counts up my multiples of four <p>40 just add 4 from the last question one more group</p> <p>OTHER RESPONSES</p> <p>(36+4)</p> <ul style="list-style-type: none"> 32 and another group of 4 is 36 Uses multiplication fact <p>OTHER RESPONSES</p> <p>but has incorrect answer</p>	Multiplication and division Level 3 - Figurative units Level 4 - Repeated abstract units Level 4 - Repeated abstract units Level 5 - Multiplication and division as operations Level 5 - Multiplication and division as operations Level 4 - Repeated abstract units Level 4 - Repeated abstract units Level 5 - Multiplication and division as operations
Aspect 5 Multiplication and division Task 28 I've made 27 cakes. 6 cakes fit in a box. How many boxes will I need? How did you work that out? Additional prompt questions may be needed. If student says 4 boxes, ask how many cakes will four boxes hold? (24) But I have 27 cakes, what happens to the other cakes? If the student says 5 boxes, ask, are all the boxes full?	Student: <ul style="list-style-type: none"> Starts at 6 and counts up by multiples of six to get to 4 boxes (with 3 cakes left over) or 5 boxes (knowing that one box will not be full) Uses multiplication facts (6 x 4 or 5 x 6) Answer is 4 and there are 3 cakes left over or answer is 5 and there are 3 spaces left in the last box Divides 27 by 6 = 4 remainder 3 <p>4 all boxes full. 27 odd except 3 more so you'd need 3 more to make 5 boxes</p> <p>OTHER RESPONSES</p>	Multiplication and division Level 4 - Repeated abstract units Level 5 - Multiplication and division as operations Level 5 - Multiplication and division as operations May need further questioning

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<p>Aspect 5 Multiplication and division Task 29 Show the 7 x 3 rectangle and the unit square to the student.</p> <div></div> <p>How many squares like this one would you need to cover the rectangle completely?</p> <p>Provide the student with a copy of the rectangle and ask: Can you draw what the squares would look like?</p> <p><i>made one row/column of 7, then added another 7 to make 14 then another 7 for 21</i></p>	<p>Student:</p> <ul style="list-style-type: none">Counts around the perimeterCounts the units by ones inconsistentlyCounts the units by ones consistently. Draws units individually <div></div> <ul style="list-style-type: none">Rhythmic counts the units (1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21) and draws units using a grid <div></div> <ul style="list-style-type: none">Counts the units in multiples of 3 or 7 and draws units using a grid.Uses multiplication and draws a grid. <p>OTHER RESPONSES</p>	<p>Multiplication and division</p> <p>No Level</p> <p>Level 1 - Forming equal groups</p> <p>Level 1 - Forming equal groups</p> <p>Level 2 - Perceptual multiples</p> <p>Level 2 - Perceptual multiples</p> <p>Level 3 - Figurative units</p>
<p>Note: Task 29 may also link to <u>Aspect 7: Unit structure of length, area and volume</u></p>		

