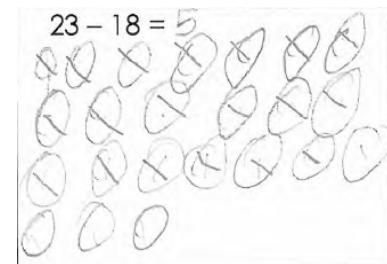

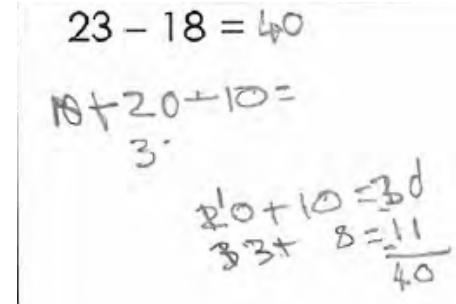
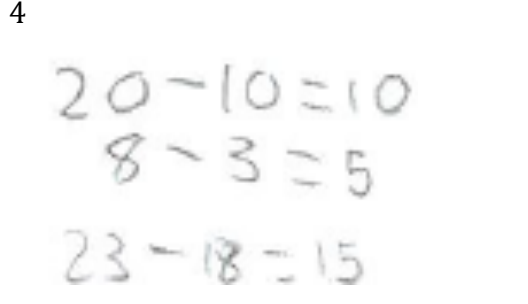
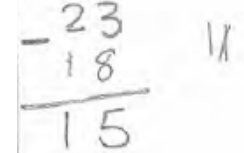
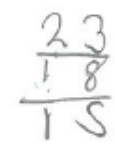


SUBTRACTION: SAMPLE LEARNER WORKINGS AND EARLY ARITHMETIC STRATEGIES¹

Stage Number	Stage Descriptor	Characteristics (representing increasing levels of sophistication)
0	Emergent counting	Cannot count visible items. The child might not know the number words or might not coordinate the number words with the items
1	Perceptual counting	Can count only visible items starting from 1. Including seeing, hearing and feeling
2	Figurative counting	Can count concealed items but the learner will ‘count all’ rather than ‘count on’.
3	Initial number sequence	Initial number sequence. The child can count on rather than counting from one, to solve + or missing addends. May use the counting down to solve removed items. (count-back-from)
4	Intermediate number sequence	Count-down-to to solve missing subtrahend (e.g. 17-3 as 16, 15 and 14 as an answer. The child is able to use a more efficient way to count down-from and count down-to strategies (count-back-to)
5	Facile number sequence	Uses of range of non-count-by one strategies . These strategies such as compensation, using a known result, adding to 10. Commutativity, subtraction as the inverse of addition, awareness of the 10 in a teen.

<p>ITEM 2.1 8 - 2</p> <p>$4 - 2 + 4 = 6$</p>	<p>ITEM 2.2 12 - 7</p> <p>$10 - 5 + 2 = 3$</p>
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ITEM 2.3		23 - 18	
1		2	
3		4	
5		6	

¹ **Source:** Wright, R. J., Martland, J., & Stafford, A. K. (2006). *Early numeracy: assessment for teaching and intervention*. London: Sage Publications Ltd. p.22

$20 - 10 + 8 - 3 = 15$ $\downarrow \quad \downarrow$ $10 + 5 = 15$	
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ITEM 2.4

467 - 43

1	2	3
$\begin{array}{r} 467 \\ - 43 \\ \hline 424 \end{array}$	$467 - 43 = X$ $400 + 60 + 7$ $- 40 + 3$ $\hline 400 + 20 + 4$ $= 424$	$400 - 40 = 360$ $60 - 30 = 30$ $7 - 3 = 4$ $360 + 30 + 4 = 394$
4	5	
$467 - 43 = 376$ $400 - 100 + 40 - 7 + 3 = 376$ $340 + 33 + 3 = 376$	$400 - 0 = 400$ $60 - 40 = 20$ $7 - 3 = 4$ $X = 424$	

ITEM 2.5

305 - 97

1	2
$305 - 97 = 208$ $300 - 100 = 200$	$305 - 97 = 212$ $\begin{array}{r} 305 \\ - 97 \\ \hline 212 \end{array}$
3	4
$300 - 0 = 300$ $0 - 90 = 0$ $5 - 7 = 0$ $X = 300$	$300 - 90 + 7 - 9 = 212$ $210 + 2 = 212$
5	
$300 - 90 = 210$ $0 - 7 = 0$ $5 - 7 = 0$ $305 - 97 = 208$	