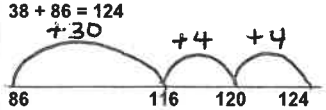
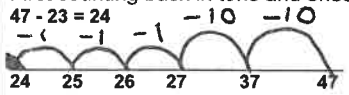
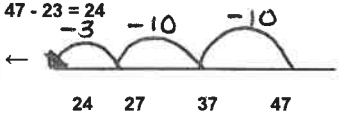
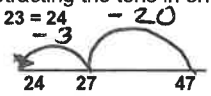
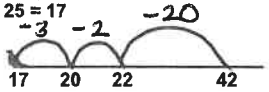
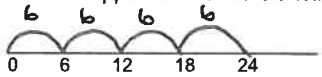
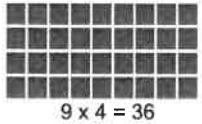
	Addition	Subtraction	Multiplication	Division
Yr 3	**Number Line** Children will continue to use empty number lines with increasingly large numbers, including compensation where appropriate. Count on from the largest number irrespective of the order of the calculation **38 + 86 = 124**  **Informal methods** Children will begin to use informal paper methods (jottings) to support, record and explain partial mental methods building on existing mental strategies. **Adding by partitioning** **67 + 24 = 91** **60 + 20 = 80** **7 + 4 =11** **80 + 11 = 91** Partitioning can be demonstrated using arrow cards. **Formal methods** Adding the ones first then the tens Expanded method only **67 +24 = 11 (7+4), 80 (60+20), 91** **267 + 85 = 12 (7+5), 140 (60+80), 200, 352** Bar models for problem solving and missing number calculations	**Number line** Children will continue to use empty number lines with increasingly large numbers. Children will begin to use number lines to support calculations. Children will begin to use empty number lines to support calculations **Counting back** First counting back in tens and ones **47 - 23 = 24**  Then helping children to become more efficient by subtracting the ones in one jump (by using the known fact 7 - 3 = 4). **47 - 23 = 24**  Subtracting the tens in one jump and the ones in one jump. **47 - 23 = 24**  Bridging through ten can help children become more efficient **42 - 25 = 17**  Children will begin to use informal pencil and paper methods (jottings). **Informal methods** Partitioning demonstrated using arrow cards **67 - 24 = 43** **67 - 20 = 47** **47 - 4 = 43** **Formal methods** Expanded column method no exchange **67 - 24 = 3 (7 - 4), 40 (60-20), 43**	**Informal methods** Children will continue to use: Repeated addition 4 times 6 is 6+6+6+6+ = 24 or 4 lots of 6 or 6 X 4 Children should use number lines or bead bars to support their understanding.  **Arrays** Children should be able to model a multiplication calculation using an array  **9 x 4 = 36** 9 x 4 = 36 **Problem solving** Eg. find a ribbon that is 4 times as long as the blue ribbon  9cm 20cm Using symbols for unknown numbers to complete equations using inverse operations □ x 5 = 20 3 x △ = 18 □ x ○ = 32 Partitioning using the grid method - TO x O **38 x 5 = 190** | X	30	8
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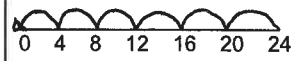
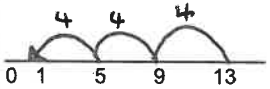
5	150	40	 **150 + 40 = 190**	**Informal methods** Ensure that the emphasis in Y3 is on grouping rather than sharing. Children will continue to use: Repeated subtraction using a number line - taking away a group at a time. Children will use an empty number line to support their calculation. **24 ÷ 4 = 4**  Children should also move onto calculations involving remainders. **13 ÷ 4 = 3 r 1**  Using symbols to stand for unknown numbers to complete equations using inverse operations **26 ÷ 2 = □ 24 ÷ △ = 12** **□ ÷ 10 = 8**