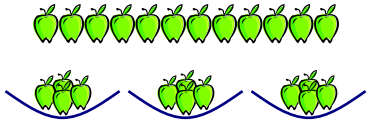
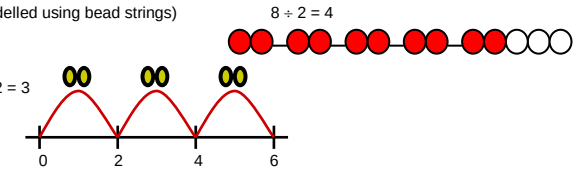
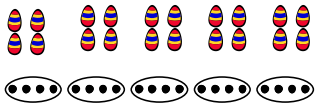
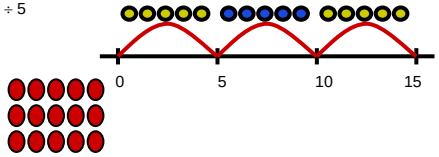
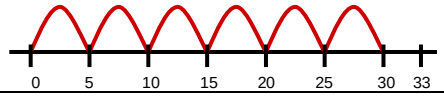
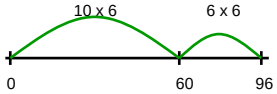
Calculation Policy: Division

	Age related expectations	Methods			Rapid recall	Mental Calculation
YR	Solve problems (practically) by sharing and halving.	**Practical / recorded using ICT** (e.g. digital photos / pictures on IWB)	**Pictures / Objects** 6 cakes shared between 2  6 cakes put into groups of 2 	**Symbols** 6 cakes shared between 2  6 cakes put into groups of 2 		No recording
Y1	Solve (practical) problems that involve sharing into groups of 2, 5 or 10 *Division as sharing small quantities and finding simple fractions of objects, number and quantities.*		**Pictures / Symbols** How many apples in each bowl if I share 12 apples between 3 bowls? 	**Number tracks / Number line** (modelled using bead strings) 8 ÷ 2 = 4 6 ÷ 2 = 3  0 2 4 6		No recording
Y2	As Y1 plus multiples of 3 and apply to calculations and problem solving *Division as sharing small quantities and finding simple fractions of objects, number and quantities.*	**Pictures / Symbols** Four eggs fit in a box. How many boxes would you need to pack 20 eggs? 	**Number lines / Arrays** 15 ÷ 5  0 5 10 15	**Partitioning (where it is easy to do so)** 28 ÷ 2 20 ÷ 2 = 10 8 ÷ 2 = 4	Derive / recall ÷ facts for 2, 5 and 10 tables Derive / recall halves of even numbers to 40	Solve problems involving division facts for the 2,5 and 10 times table.
Y3	Divide whole nos. by 1 digit numbers(2,3,4,5 and 8 only) (short division) As Y2 plus multiples of 4 and 8 and apply to calculations and apply to problem solving	**Number lines (start from zero) Repeated addition** When it is not appropriate to use a sharing method for division and the division fact is not known, repeated addition (using the relationship between multiplication and division) can be used. Eg 33 ÷ 5 = 6 r3  0 5 10 15 20 25 30 33	**Partitioning (multiples of the divisor)** Ensure dividing by 2/4/ taught by half/half the half again etc 50 ÷ 3 = 16 r2 10 x 3 = 30 6 x 3 = 18 (48)	**'Short' division** Example without remainder: 81 ÷ 3 2 7 3 ⟌ 8[2]1 Children use their knowledge of the 3 times table to find, "How many 3s in 80 where the answer is a multiple of 10?" This gives 20 threes (since 30 threes would be too many), with 20 remaining (2 tens are carried over to the next column) Now ask: 'How many threes in 21". Example with remainder: 4 7 r 2 6 ⟌ 2 8[4]4	Derive / recall ÷ facts for 2, 3, 4, 5, 6 and 10 tables	Solve problems involving division facts for the 3 ,4 and 8 times table. Use related facts to 2 digit nos. (e.g. 24 ÷ 2 = 12, 240 ÷ 20 = 120)
Y4	Divide whole nos. by 1 digit numbers (short division) As Y3 involving all relate division facts to multiplication facts to 12 x 12 and apply to calculations and apply to problem solving	**Number lines (start from zero)** 96 ÷ 6 = 16  10 x 6 6 x 6 0 60 96	247 ÷ 7 = 35 r2 30 x 7 = 210 5 x 7 = 35 (245)		Derive / recall ÷ facts up to the 10 times table	Use related facts (e.g. 200 x 3 = 600 so 600 ÷ 3 = 200) Dividing by 1 2 digit and 1 digit ÷ 10 and 100
Y5	Divide nos. up to 4 digits by a 1 digit no.(short division) Apply to solving problems.		43.4 ÷ 7 = 6.2 6 x 7 = 42 0.2 x 7 = 1.4 (43.4)		Recall quickly ÷ facts up to 10 times table	Divide whole numbers and decimals by 10, 100 and 1000. Decompose larger nos. into their factors to help divide mentally.
Y6	Divide nos. up to 4 digits by a digit whole no. (long division) Apply to solving problems.	**Short Division** See egs from Y3/4/5		**'Long' division** 560 ÷ 24 (estimate: 550 ÷ 25 = 22) 23 24⟌ 560 −480 80 −72 8 Answer: 23 R 8	Derive ÷ facts involving multiples of 10 / 100 (eg 240 ÷ 30) and decimals (eg 4.8 ÷ 6)	Perform mixed operation multi step problems mentally