

Year 5

Addition

	STATUTORY EXPECTATIONS					Mental Calculations	Broadening and deepening understanding	Vocabulary
Y5	Add whole numbers >4 digits, including using formal written methods (column addition) Decimals up to 2dp (e.g. 7.25 +4.57)	Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy. Solve addition multi step problems in context, deciding which operations and methods to use and why.	Solve problems involving number up to 3dp. Solve problems involving converting between units of time. [Measurements]	Compact vertical $\begin{array}{r} 23.70 \\ + 48.56 \\ \hline 72.26 \\ 11 \end{array}$	Pupils practise adding decimals, including a mix of whole numbers and decimals, fractions and complements of 1.	Count in steps of powers of 10 up to 1 000 000. Add numbers with increasingly large numbers e.g 12462 + 2300 = 14762	<ul style="list-style-type: none"> Measures Roman Numerals Geometry (angles in shapes) 	add total plus increase more more than sum altogether

Subtraction

	STATUTORY EXPECTATIONS					Mental Calculations	Broadening and deepening understanding	Vocabulary
Y5	Subtract whole numbers >4 digits including using formal methods (column subtraction) Decimals up to 2dp. (e.g. 72.5 – 45.7)	Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy. Solve multi step problems in contexts, deciding which operations/methods to use and why.	Solve problems involving number up to 3dp. [Fractions] Solve problems involving converting between units of time. [Measurements] Solve problems involving measure [e.g. length, mass, volume, money] using decimal notation including scaling. [Measurement]	Taking away no number line $72.5 - 45.7$ $\begin{array}{r} 72.5 - 40 = 32.5 \\ 32.5 - 5 = 27.5 \\ 27.5 - 0.7 = 26.8 \end{array}$	Pupils practise subtracting decimals, including a mix of whole numbers and decimals, decimals with different numbers of decimal places and complements of 1.	Count back in steps of powers of 10 up to 1 000 000. Subtract numbers with increasingly large numbers e.g 12 462 – 2 300 = 10 162	<ul style="list-style-type: none"> Measures Roman Numerals Geometry (angles in shapes) 	subtract fewer decrease reduce less less than difference difference between take away take from minus

Multiplication

	STATUTORY EXPECTATIONS					Mental Calculations	Broadening and deepening understanding	Vocabulary
Y5	Use a formal written method (including long x for TO nos) TO x TO HTO x O / HTO x TO ThHTO x O Convert between units of measure (e.g. km/m; m/cm; cm/mm; kg/g; litre and ml)	47 x 36 = 1692 (estimate 50 x 40 = 2000) $\begin{array}{r rrrr} \times & 40 & 7 & & \\ \hline 30 & 1200 & 210 & 1410 & \\ 6 & 240 & 42 & 282 & \\ \hline & & & 1692 & \end{array}$	27 x 34 = 918 (estimate 30 x 30 = 900) $\begin{array}{r} 27 \\ \times 34 \\ \hline 28 \quad (7 \times 4) \\ 80 \quad (20 \times 4) \\ 210 \quad (7 \times 30) \\ 600 \quad (20 \times 30) \\ \hline 918 \end{array}$	2741 x 6 = 16446 (estimate 3000 x 6 = 18 000) $\begin{array}{r} 2741 \\ \times 6 \\ \hline 16446 \end{array}$	Pupils connect multiplication by a fraction to using fractions as operators (fractions of), and to division. This relates to scaling by simple fractions, including those > 1. Find fractions of numbers and quantities, writing remainders as a fraction.	Identify multiples/factors, including finding all factor pairs of a number, & common factors of two numbers. Multiply numbers (including those with decimals) by 10,100 and 1000.	<ul style="list-style-type: none"> Area of a compound shapes Multiplying fractions by whole numbers Converting measurements between imperial and metric 	multiply times groups of lots of product times table multiplied by

Division

	STATUTORY EXPECTATIONS						Mental Calculations	Broadening and deepening understanding	Vocabulary
Y5	Use the formal written method of short division (interpret remainders appropriately for the context). HTO ÷ O ThHTO ÷ O Convert between units of measure (eg km/m; m/cm; cm/mm; kg/g; litre and ml)	346 ÷ 8 = 43 r2 (estimate >40, <50) 346 ÷ 8 (estimate: 400 ÷ 8 = 50) $\begin{array}{r} 8 \overline{)346} \\ \underline{-320} \quad (8 \times 40) \\ 26 \\ \underline{-24} \quad (8 \times 3) \\ 2 \end{array}$	291 ÷ 3 = 97 (estimate: 270 ÷ 14) $\begin{array}{r} 90 + 7 \\ 3 \overline{)290 + 1} = 3 \overline{)270 + 21} \\ \underline{270} \quad 97 \\ 21 \\ \underline{21} \end{array}$ This is then shortened to: $\begin{array}{r} 97 \\ 3 \overline{)291} \end{array}$	432 ÷ 5 = 86 r 2 (estimate: 400 ÷ 5 = 80) $\begin{array}{r} 86 \text{ r } 2 \\ 5 \overline{)432} \end{array}$	8520 ÷ 6 = 1420 $\begin{array}{r} 1420 \\ 6 \overline{)8520} \end{array}$	Pupils connect ÷to fractions. Find fractions of numbers and quantities writing remainders as a fraction.	Divide numbers (including those with decimals) by 10,100 and 1000.	<ul style="list-style-type: none">Measures converting between imperial and metricSimplifying fractions	divide divided by divisible by share share equally group group of