

Wk Progression Focus

26 **Addition and subtraction; multiplication and division**
 Week 26 focuses on adding and subtracting 2-, 3- and 4- digit numbers; and on using knowledge of factors, products and doubling to solve multiplication problems mentally.

Weekly Summary

Add two 2-digit numbers or a 2-digit number to a 3- or 4-digit number mentally; subtract 2-, 3- and 4-digit numbers using counting up; derive factors of 2-digit numbers and use factors and doubling to solve multiplication mentally; solve integer scaling problems using mental strategies and spot a relationship between products; solve correspondence problems, using a systematic approach and calculate using mental multiplication strategies

Strands

MAS Mental addition and subtraction; **MMD** Mental multiplication and division; **WMD** Written multiplication and division; **PRA** Problem solving, reasoning and algebra

Objectives

- **MAS.45** Add mentally 2-digit to 3-digit numbers by partitioning or counting on
- **MAS.56** Use mental strategies to add 2-digit, 3-digit and 4-digit numbers
- **MAS.43** Add to the next multiple of 100 by counting up from any 2-digit or 3-digit number
- **MAS.49** Count up to subtract any 3-digit from 3-digit number
- **MAS.50** Subtract 4-digit from 4-digit multiples of 1000 by counting up
- **MMD.41** Use doubling and halving to multiply and divide by 4 and 8 and solve correspondence problems
- **MMD.61** Identify factors and multiples, and begin to find common factors
- **WMD.53** Solve integer scaling problems and harder correspondence problems, such as n objects are connected to m objects
- **PRA.59** Solve addition and subtraction two-step problems in contexts
- **WAS.52** Use column addition to add two 4-digit numbers with a total \leq 10000

27 **Addition and subtraction**
 Week 27 focuses on addition and subtraction using written column

Solve written addition of two 4-digit numbers; add amounts of money (pounds and pence) using column addition; solve 4-digit minus 4-digit and 4-digit minus 3-digit subtractions using written column method (decomposition)

WAS Written addition and subtraction; **PRA** Problem solving, reasoning and algebra; **MAS** Mental addition and subtraction

methods.

and check subtraction with addition; solve word problems choosing an appropriate method

- **WAS.62** Use column addition to add pairs of 2-place decimals, including amounts of money
- **WAS.55** Use expanded or compact decomposition to subtract numbers with up to 4-digits (easier)
- **WAS.58** Use expanded or compact decomposition to subtract numbers with up to 4-digits (harder)
- **WAS.56** Use column addition to add several numbers with up to 4-digits with answers > 10000
- **WAS.60** Use compact decomposition to subtract 2-, 3- or 4-digit from 4-digit numbers
- **PRA.53** Use, explain and justify mathematical reasoning
- **PRA.59** Solve addition and subtraction two-step problems in contexts
- **PRA.58** Solve simple measure and money problems involving fractions and decimals up to 2 decimal places
- **MAS.60** Use counting up to subtract 4-digit numbers from near multiples of 1000
- **MAS.61** Use counting up as an efficient mental strategy with minimal jottings
- **MAS.58** Understand addition and subtraction as inverses of each other and use this to find



28 **Coordinate geometry; statistics and data**

Week 28 focuses on using coordinate grids; and developing that understanding to draw line graphs and know that intermediate points have meaning.

Use coordinates to draw polygons; find the coordinates of shapes after translation; draw and interpret bar charts and pictograms; draw line graphs and understand that intermediate points have meaning

GPD Geometry: position and direction; **STA** Statistics

29 **Multiplication and division; fractions**

Weeks 29 and 30 focus on

Use the vertical algorithm (ladder) to multiply 3-digit numbers by 1-digit numbers; find non-unit fraction of amounts, using 'chunking'; add fractions with like denominators, including totals greater than 1; divide by 10

WMD Written multiplication and division; **PRA** Problem solving, reasoning and algebra; **MMD** Mental multiplication and division; **FRP**

relationships

- **MAS.51** Count up to find change from £10, £50 and £100
- **GPD.55** Describe positions on a 2-dimensional grid as co-ordinates (1st quadrant)
- **GPD.57** Plot points and draw sides to complete a polygon on a co-ordinate grid (1st quadrant)
- **GPD.60** Describe movements between positions as translations of a given unit to left/right or up/down
- **GPD.66** Identify and describe the position of a shape on a co-ordinate grid following a translation
- **STA.54** Interpret and compare information on a pictogram and represent it on a bar chart
- **STA.55** Draw and interpret bar charts where 1 division represents 5 or 10 units
- **STA.58** Solve comparison and difference problems using information presented in bar charts
- **STA.59** Use a line graph to represent the effect of multiplying any number by 6 (e.g. 7.5×6)
- **STA.61** Interpret and present continuous data using line graphs
- **WMD.49** Multiply 2- and 3-digit by 1-digit numbers using the ladder method



enhancing mental and written strategies for multiplication and division; and link this to unit and non-unit fractions and the decimal results of dividing by 10 and 100.

and 100 (to give answers with 1 and 2 decimal places)

Fractions, ratio and proportion; **DPE** Decimals, percentages and their equivalence to fractions

- **WMD.51** Divide 2- and 3-digit by 1-digit numbers using a written method drawn from mental strategies with integer remainders and answers between 10 and 20
- **PRA.60** Solve number and practical problems with increasingly large positive numbers
- **PRA.63** Sustain a line of enquiry, make and test a hypothesis
- **PRA.62** Solve problems involving harder fractions to calculate and divide quantities
- **MMD.57** Use mental strategies to solve divisions including dividing by 1
- **FRP.50** Find any fraction of an amount and relate to division and multiplication
- **FRP.44** Add and subtract fractions with the same denominator
- **FRP.64** Convert mixed numbers to improper fractions and vice versa
- **DPE.61** Use place value to multiply and divide numbers by 10 and 100, involving 2-place decimals
- **DPE.65** Multiply and divide numbers by 10 and 100 to give 1- or 2-place decimal answers

30 **Multiplication and division; fractions**

Weeks 29 and 30 focus on enhancing mental and written

Multiply 2-digit numbers by 11 and 12; look for patterns and write rules; multiply 2-digit numbers by numbers between 10 and 20 using the grid method; begin to use the grid method to multiply pairs of 2-digit numbers; use

MMD Mental multiplication and division; **PRA** Problem solving, reasoning and algebra; **WMD** Written multiplication and division;

- **MMD.55** Use mental strategies to solve multiplications including multiplying by 0 and 1,



strategies for multiplication and division; and link this to unit and non-unit fractions and the decimal results of dividing by 10 and 100.

mental strategies and tables facts to divide 2-digit and 3-digit numbers by 1-digit numbers to give answers between 20 and 50, with and without remainders; find non-unit fractions of amounts

FRP Fractions, ratio and proportion

dividing by 1, multiplying together three numbers

- **MMD.58** Understand multiplication and division as inverses of each other and use this to find relationships
- **MMD.44** Divide mentally numbers just beyond the tables by subtracting the multiple of 10 (no remainders)
- **PRA.52** Describe, predict and explain patterns
- **PRA.58** Solve simple measure and money problems involving fractions and decimals up to 2 decimal places
- **PRA.62** Solve problems involving harder fractions to calculate and divide quantities
- **WMD.56** Use the grid method to multiply 2-digit by 2-digit numbers and solve problems in which n objects are connected to m objects (distributive law)
- **WMD.52** Divide 3-digit by 1-digit numbers using a written method drawn from mental strategies with integer remainders and answers < 50
- **WMD.51** Divide 2- and 3-digit by 1-digit numbers using a written method drawn from mental strategies with integer remainders and answers between 10 and 20
- **FRP.50** Find any fraction of an amount and relate to

division and multiplication

- **FRP.57** Use division and multiplication to find non-unit fractions of larger amounts (whole-number answers)