

Y6 Learning Sequences

Numbers to 10,000,000

Learning Steps

Prior learning check & remediation/deepening of prior

- Composition of 10,000
- Composition of 100,000
- Composition of 1,000,000
- Position numbers to 10,000 on a number line
- Position numbers to 100,000 on a number line
- Position numbers to 1,000,000 on a number line
- Count forwards and backwards in powers of ten to 1,000,000
- Represent numbers to 10,000,000
- Partition numbers to 10,000,000
- Value of digits to 10,000,000
- Number lines to 10,000,000
- Compare numbers to 10,000,000 (same PV)
- Compare numbers to 10,000,000 (different PV)
- Order numbers to 10,000,000

PS Lesson: PV to 1,000,000 (all possibilities)

round any 4-digit number to the nearest 10, 100, 1000

round up to seven-digit numbers to any power of 10

PS Lesson: rounding (multi-domain)

Written column addition to 10,000,000

Written column subtraction to 10,000,000

PS Lesson: column addition & subtraction (multi-step)

Assessment

Pause & Stretch: re-assessment & deepening as required

PS Skills Lesson: trial & improvement

Y6 Learning Sequences

Order of Operations

Learning Steps

Prior learning check & remediation/deepening of prior

- Missing number equations
- Balancing equations
- Column addition– missing digits
- Column subtraction – missing digits
- Most efficient method
- Order of Operations – no brackets or orders
- Order of Operations – brackets & orders

Assessment

Pause & Stretch: re-assessment & deepening as required

Y6 Learning Sequences

Multiplication

Learning Steps

Prior learning check & remediation/deepening of prior

- Moving digits multiplication including decimals
- Convert large metric units to small
- Convert large metric units to small

PS Lesson: converting units large to small (multi-step / visual)

- Short multiplication refresh including decimals
- Long multiplication with no regroup
- Long multiplication with one regroup
- Long multiplication with two regroup
- Long multiplication with multiple regroup
- Long multiplication Practice Lesson

PS Lesson: long multiplication (all possibilities)

- Distributing for multiplying by a 2-digit number
- Double and half to multiply without long multiplication
- Factorisation to remove long multiplication
- Most efficient method for multiplications

PS Lesson: multiplication (working backwards)

Assessment

Pause & Stretch: re-assessment & deepening as required

PS Skills Lesson: working collaboratively

Y6 Learning Sequences

Division

Learning Steps

Prior learning check & remediation/deepening of prior

Moving digits division including decimals

Convert small metric units to large

Short division: decimal dividends

Short division: decimal quotients (expressing remainders as decimals)

Short Division Practice Lesson (varied fluency and think)

PS Lesson: short division (word problems)

Building multiple strings (fact bank)

Long division – no remainder – divisor smaller than first 2 digits of dividend

Long division – no remainder – divisor larger than first 2 digits of dividend

Long division – remainders

Long division – remainders

Long division practice lesson (VF/RPS)

PS Lesson: long division (word problems)

Most efficient method for division

Assessment

Pause & Stretch: re-assessment & deepening as required

PS Skills Lesson: working systematically

Learning Steps

Prior learning check & remediation/deepening of prior

Common Factors

Simplifying Fractions – Basic Fluency

Simplifying Fractions – Practice (VF/Think)

Common multiples

Comparing fractions – Basic Fluency

Comparing & ordering fractions – Practice (VF/Think)

PS Lesson: common denominators (visual)

Adding proper fractions with different denominators from same multiple family

Adding proper fractions with different denominators

Adding mixed numbers with different denominators not through whole

Adding mixed numbers through whole

Practice Lesson: adding fractions (VF/Think/GDS)

Subtracting fractions with different denominators from same multiple family

Subtracting fractions with different denominators

Subtracting mixed numbers with different denominators (not breaking whole)

Subtracting mixed numbers with different denominators (breaking whole)

Practice Lesson: subtracting fractions (VF/Think/GDS)

PS Lesson: adding and subtracting fractions (multi-step / multi-domain)

Multiplying fractions Y5 revisited

Multiply fractions by fractions

Multiply fractions by fractions VF, Think, GDS

Divide a fraction by integer (numerator-divisor match)

Divide any fraction by integer (pictorial method)

Divide any fraction by integer (formal method)

PS Lesson: multiplying and dividing fractions (investigations)

Calculating with fractions practice lesson

Percentages of amounts multiples of 25%, 50%, 75%

Percentages of amounts 10%

Percentages of amounts multiples of 10%

Percentages of amounts 5%

Percentages of amounts multiples of 5%

Percentages of amounts 1%

Finding percentages of amounts – multiples of 1%

Most efficient method for percentages

Varied practice lesson – percentages of amounts

Finding the whole from given percentage/fraction parts

PS Lesson: percentages (real-life word)

Percentages & pie charts

FDP Equivalence

Fractions of amounts & fractions as operators

Assessment

Pause & Stretch: re-assessment & deepening as required

PS Skills Lesson: finding starting points

Y6 Learning Sequences

Ratio

Learning Steps

Prior learning check & remediation/deepening of prior

Language of ratio – scaling up
Language of ratio – simplest form
Real-life ratio problems
Recipes
Scale drawings
Scale factors
Miles & Kilometres
Correspondence Problems

Assessment

Pause & Stretch: re-assessment & deepening as required

Y6 Learning Sequences

Algebra

Learning Steps

Prior learning check & remediation/deepening of prior

1-step function machines
2-step function machines (output)
2-step function machines (input)
Missing Number Equations
Balancing Number Equations
Sequences
Form expressions
Algebraic expressions
Solve 1-step equations
Solve 2-step equations
Pairs of values

Assessment

Pause & Stretch: re-assessment & deepening as required

Y6 Learning Sequences

Geometric Reasoning

Learning Steps

Prior learning check & remediation/deepening of prior

Measure acute angles including estimation

Measure obtuse angles including estimation

Draw angles

Draw accurate 2D shapes

Construct 3D shapes from 3D nets

PS Lesson: nets (visual problems)

Right angles: calculating missing angles

Straight lines: calculating missing angles

360° around a point: calculating missing angles

Measure reflex angles

Triangles: calculating missing angles

Quadrilaterals: calculating missing angles

Vertically opposite angles: calculating missing angles

Mixed practice: calculating missing angles

Area of parallelograms

Area of triangles

PS Lesson: same area but different perimeter & vice-versa (more than 1 possibility)

Mixed area practice

PS Lesson: area (multi-step)

Solving problems involving reading/plotting coordinates in all 4 quadrants

Solving problems involving translating coordinates in all 4 quadrants

Solving problems involving reflecting coordinates in all 4 quadrants

Features of a circle & radius and diameter relationship

Assessment

Pause & Stretch: re-assessment & deepening as required

PS Skills Lesson: visualising

Y6 Maths Plan

Probability

Learning Steps

The vocabulary of probability
Probability expressed as fractions
Probability expressed as decimals
The probability scale
Sum of probabilities

Y6 Learning Sequences

Calculator Skills

Learning Steps

- Inverse checks using a calculator
- Using the negative number feature of calculators
- Interpreting money using calculators
- Solving problems with calculators
- Investigating vampire numbers

PS Skills Lesson: conjecture & generalising