Bilbrook CE Middle School
Year 8 Maths

YEAR 9

Compare distributions using the range

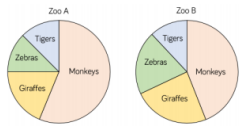
Identify outliers

Mode

1 1 2 2 6 6 7 7 8 8

Mean

Identify misleading graphs



Compare distributions using charts

Range

Quantitative data

$5 \leq t < 10$

Choose appropriate diagrams

Draw and interpret line graphs

Draw and interpret pie charts

Pictograms, bar charts and vertical line charts

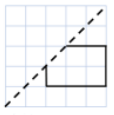
Draw multiple bar charts

Questionnaires

Data Handling Cycle

Statistical enquiry

Distance	Tally	Frequency
80 m		
81 m	II	2



Reflect a shape in vertical, horizontal and diagonal

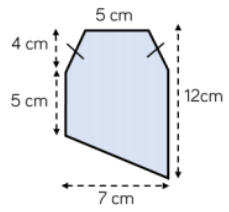
Line symmetry

Line symmetry & reflection

Area of a circle

$A = \pi r^2$

Perimeter and area of compound shapes



Perimeter and area of compound shapes

Area of trapezium = $\frac{(a+b)\times h}{2}$

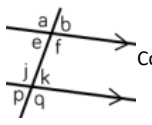
Calculate the area of a trapezium

Area of triangles, rectangles and parallelograms

Area of trapezia & circles

Calculate missing angles

Construct triangles



Co-interior angles

Parallel lines and the transversal

Angles

Time and calendar

21 : 50

Weight and capacity

Money

Order of operations

Rounding to given d.p

Rounding powers of 10 to 1.s.f

Number

Estimate answers

Use a calculator with numbers in standard form

Compare and order numbers

Negative powers of 10

Positive powers of 10

10^3

Solve % problems

Express numbers as fraction or % of another

% increase / decrease with a multiplier

240%

Convert decimals and % greater than 100%

Calculate fractions, decimals and %

Fractions and %

Convert between fractions and %

% change

Standard Form

Numbers <1

Numbers between 0-1

$\frac{1}{3000}$

Calculate numbers in standard form

3×10^4

Laws of indices

x / ÷ indices

$x > 7$

Form and solve simple inequalities

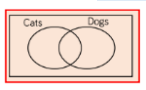
$3(x-5)$

Expand brackets and simplify

$2a - 3b$

Use directed number with algebra

Algebra



Probabilities from Venn diagrams

Probabilities from sample spaces

Construct sample spaces

	Squares	Circles
Green	3	
Red		

Two-way tables

$3x^2 + 2x^2$

+ / - with indices

Generate sequences

Formulae, expressions, identities and equations

Form and solve equations with brackets

Multiply / factorise single brackets

Form algebraic expressions

The product rule

Probabilities from two-way tables

Probability

Continuous data

Discrete data

Frequency tables

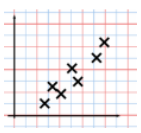
Non-linear relationships

Different types of data

Lines of best fit

Linear correlation

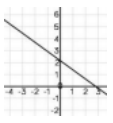
Scatter graphs



Representing data

Plot graphs of the form y=mx+c

Explore graphs with negative gradient



Link y=mx to direct proportion problems

Use the line y=x

Coordinates in all four quadrants

Multiply and divide algebraic fractions

Multiply and divide any fraction

$\frac{1}{3} \div 5$

Divide any pair of fractions

Dividing fractions

Find the product of pairs of fractions

X / ÷ fractions

Represent multiplication of fractions

Understand and use the reciprocal

Algebra

Lines that are parallel to the axes

Use lines of the form y=mx

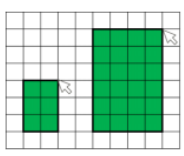
Use lines of the form y=x+a

$y = x + 4$

Link graphs to linear sequences

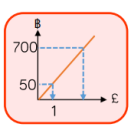
Maps using scale factors and ratios

Scale diagrams



Scale factor

Convert currencies



Problems involving direct proportion

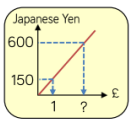
Understand pi as ratio

Pi (π)

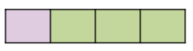
Express ratios in their simplest integer form

Green : White
12 : 6

Solve ratio problems



The meaning and representation of ratio



Conversion graphs

Multiplicative Change

Compare ratios and fractions

Divide in a given ratio

3 : 4

Ratio notation

Ratio and Scale

YEAR 8

welcome