

Division without dividing

$$\frac{2}{5} \div \frac{3}{4} = \frac{2}{5} \times \frac{4}{3} = \frac{8}{15}$$

Exit

Measuring data

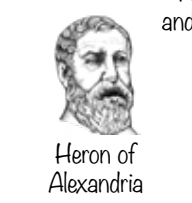
Mode, median and mean
Using a frequency table
Range



Florence Nightingale: statistician

Presentation of data

Frequency tables
Bar charts
Pie charts
Vertical line charts



Heron of Alexandria

Calculating space

Perimeter
Area of a triangle
Area of a trapezium
Volume of a cuboid
Surface area of a cuboid



Al-Khwarizmi and the House of Wisdom

Solving equations and inequalities

Solving equations by balancing

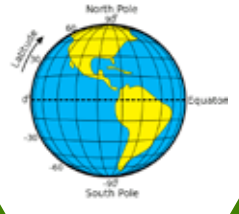
Calculating fractions, decimals and percentages

Fractions and mixed numbers
Percentage of an amount
Percentage change
Using a scientific calculator



Investigating angles

Vertically opposite angles
Angles at a point on a line
Angles around a point

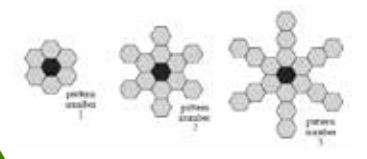


Measuring space

Using mathematical equipment
Metric units of length, mass, volume and capacity
Units of time

Pattern sniffing

Linear sequences
Term-to-term rules

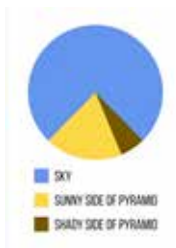


Proportional reasoning

Ratio notation
Simplifying a ratio
Using a ratio to describe the sharing of an amount



8



Playfair's pie charts and playful pie charts



13



The Curry triangle

Look out for the themes of ...
Multiplication
Inversing
Checking

Turn over for more information

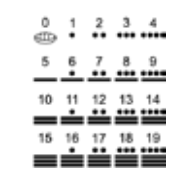
Narcissistic numbers



1634 = 1⁴ + 6⁴ + 3⁴ + 4⁴



Napier's Bones and the decimal point



Mayan number system



The Whetstone of Witte

Counting and comparing

Using the symbols > and <
Ordering integers
Ordering decimals
Comparing fractions and mixed numbers



F + V - E = 2

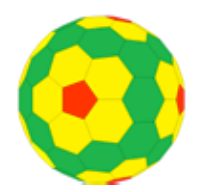
Investigating properties of shapes

Vocabulary
Properties of quadrilaterals
Properties of triangles

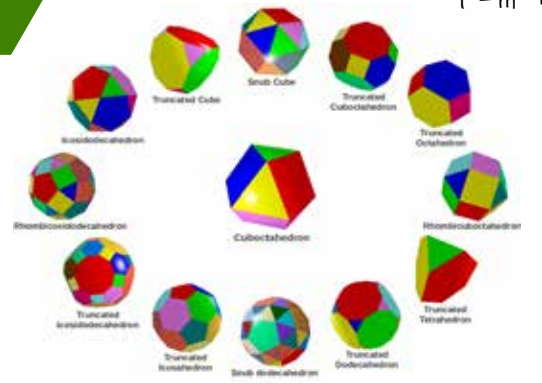
9 10 11

Exploring fractions, decimals and percentages

One quantity as a fraction of another
One quantity as a percentage of another



T = m² + mn + n²



Pascal's triangle



Numbers and the number system

Factors, multiples & primes
Reading and writing powers
Square numbers & square roots
Using a scientific calculator



Sophie Germain

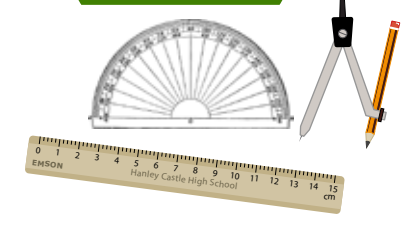
Checking, approximating and estimating

Rounding to decimal places
Rounding to significant figures
Estimating calculations

How old are you?



Assessment 1



Exploring fractions, decimals and percentages

Decimal & fraction equivalents
Simplifying fractions
Using a scientific calculator



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Taxicab numbers

Entry

Check In to every unit and practise if needed

Check out with a Quest to review your understanding