

Year 8 Mathematics Revision – Summer 2024

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PRE-CHRISTMAS TOPICS 1-5

Unit 1 – Statistical Representation

At the end of this unit **all** pupils should be able to:

- Read and interpret bar charts, pictograms, tally charts
- Construct bar charts, tally tables and pictograms
- Plot and label co-ordinates in all four quadrants

Unit 2 Statistical Measure

- Calculate the mean, range and mode from a list of discrete data
- Calculate the median from a list of discrete data with an odd and even number of values
- Calculate missing value(s) from a given average

Unit 3 – Probability

- Use appropriate vocabulary to describe the likelihood of an event occurring
- Calculate the probability of a single event occurring from equally likely outcomes
- List all possible outcomes for given events

Unit 4 – Whole Number Review

- Understand place value
- Read, write and order whole numbers
- Round whole numbers within 10 000 to the nearest 10, 100 or 1000
- State the largest and smallest possible original values of a number which has been rounded to the nearest 10, 100 or 1000
- Long multiplication
- Divide any whole number by an integer less than 10
- Use order of operation in numerical calculations, including the use of brackets

Unit 5 – Decimals

- Compare and order decimals of any size
- Add and subtract decimals of any size
- Multiply and divide decimals by 10, 100 or 1000
- Round a decimal to the nearest whole number
- Multiply and divide any decimal by a whole number
- Round a number to given number of decimal places.

POST CHRISMTAS TOPICS – UNITS 6 – 13

Unit 6 – Types of Number

- List the multiples and factors of a given whole number
- Define a prime number and list the first 10 prime numbers
- Recall square numbers up to 12 x 12 and cube of 2, 3, 4, 5, and 10
- Work out the square root of a given square number
- Calculate the HCF and LCM of two numbers from a list

Unit 7 – Negative Numbers

- Add and Subtract with negative numbers
- Multiply and divide positive and negative numbers

Unit 8 – Fractions

- Use fraction notation to describe quantities, simplifying whenever possible
- Understand and use the equivalence of fractions
- Calculate the fraction of an amount
- Add and subtract fractions with the same denominator and different denominator
- Understand the relationship between common decimals, fractions and percentages
- Compare the size of fractions
- Convert between mixed number and improper fractions

Unit 9 – 2D Shapes

- Identify horizontal, vertical, parallel and perpendicular lines.
- Describe the properties a regular shape and identify common types of polygons
- Recognise the properties of various quadrilaterals

Unit 10 – Perimeter and Area

- Work out the perimeter of simple shapes by adding all the given sides or using squared paper
- Calculate the perimeter of regular shapes
- Calculate the area of a square, rectangle and triangle
- Convert between metric units of length
- Calculate the perimeter of compound shapes
- Find the length of a side of a square and rectangle, given the area
- Calculate the area of a compound shape made from squares, rectangles and right-angled triangles
- Calculate the area of a parallelogram

Unit 11 – Angles

- Define the terms: whole turn, half turn, quarter turn
- Recognise the eight points of the compass
- Categorise types of angles, i.e. acute, straight, obtuse, reflex
- Categorise types of triangles i.e. isosceles, scalene, right angle, equilateral
- Calculate a missing angle using the appropriate angle fact
- Calculate a missing angle in a triangle
- Calculate missing angles in triangles using special triangles i.e. isosceles, right angled, equilateral

Unit 12 – Time

At the end of this unit **all** pupils should be able to:

- Read and write time in digital form and in words
- Draw an analogue clock face to show a time given in digital form and in words
- Calculate time intervals
- Extract information from simple timetables
- Solve time problems in context
- Interchange 12- and 24-hour times
- Add on a time interval to a given time