



King's High School

Department of Mathematics

# Entrance Examination

## Mathematics

### Topic List

#### **Whole Number Arithmetic**

- Adding and subtracting two, three or four digit numbers
- Multiplying and dividing numbers - traditional methods preferred but no need for long division.
- Multiplying and dividing by powers of 10
- Be familiar with the terms odd, even, prime, multiple, factor

#### **Decimal Fraction Arithmetic**

- Understand place value
- Adding and subtracting decimal numbers
- Multiplying and dividing by powers of 10

#### **Vulgar Fraction Arithmetic**

- Work out percentage 'of' a quantity
- Be able to compare the sizes of fractions, percentages and decimals
- Be able to find the fraction of a shape that is shaded

## **Geometry**

- Know that amount of turn can be measured in degrees
- Know that angles on a line sum to 180 degrees
- Know that angles in a triangle sum to 180 degrees
- Know that the angles around a point sum to 360 degrees
- Know how to find the area of a square, rectangle and compound shapes involving rectangles
- Know how to find the area of a triangle
- Know the units of area
- Be able to recognise the following shapes: Isosceles triangle, equilateral triangle, trapezium, kite
- Know and be able to use the following words: parallel, right angle, acute angle, obtuse angle, reflex angle, perpendicular.
- Be able to plot points and read coordinates in the first quadrant
- Be able to identify the order of rotational symmetry of a shape
- Be able to identify lines of symmetry

## **Measure**

- Be able to make calculations involving time 12 and 24h
- Know metric units of length and conversion factors

## **Probability and Statistics**

- Be able to find a probability for equally likely events
- Be able to interpret and draw bar graphs
- Be able to interpret pie charts
- Be able to find a mode and mean

**END OF PAPER**