**Year 9 Revision List – Core Paper**

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| **Algebra** | apply laws of indices |
| Write and simplify expressions |
| expanding single brackets |
| factorise expressions |
| substitution into formulae including brackets |
| find and use nth term of an arithmetic sequence |
| continue/explain geometric series |
| plot horizontal and vertical lines |
| plot lines from a table of values |
| application of y=mx+c |
| **Data** | use averages to compare data sets |
| calculate the mean and mode of frequency table and a grouped frequency table |
| list combinations of sets systematically |
| sample space diagrams |
| probability - outcomes sum to 1 |
| experimental probability: relative frequency |
| use of frequency trees for experimental results |
| use tree diagrams |
| construct and interpret pie charts |
| construct and interpret stem and leaf diagrams include back to back |
| plot and interpret scatter graphs |
| construct a dual diagram eg a dual bar chart |
| **Number** | calculate with negative numbers + - x ÷ |
| use order of operations BIDMAS |
| apply calculator skills: powers, roots, brackets, sign change, fraction |
| round solutions to a given number of d.p./s.f. |
| find product of prime factors, HCF, LCM |
| simplify ratios, share in a given ratio |
| use direct proportion in real life contexts: recipes, best buys problems |
| plot and use conversion graphs |
| convert and order fraction, decimal and percentage |
| calculate fractions of amounts |
| add/subtract/multiply/divide fractions |
| find reciprocals |
| **Shape** | calculate area: rectangle, triangle, parallelogram, trapezium |
| calculate circumference |
| use angle properties: point, line, triangle, vertically opposite |
| calculate unknown angles on parallel lines - giving reasons |
| calculate angles in polygons - interior and exterior |
| plot bearings |
| use compound measures: speed/dist/time |
| plot and interpret distance time graphs / travel graphs |
| mileage charts |
| calculate surface area: cuboid/triangular prism |
| calculate volume of cuboids and prisms |
| nets, plans and elevations, isometric perspectives |