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# GCSE: Edexcel Mathematics

## TOPICS FOR AUTOGRAPH

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References to

[Pearson-Edexcel GCSE Mathematics](#)

### Foundation Tier

#### 1. NUMBER

N Use of the number line

#### 2. ALGEBRA

- A8 Coordinates and graphs
- A9  $y = mx + c$ ; parallel lines
- A10 Gradient and intercept
- A11 Roots and intercepts; turning points
- A12 Linear, quadratic, cubic, reciprocal
- A14 plotting graphs, including reciprocal
- A17 Solving an equation by graphing
- A18 Solve quadratic by factorising and graphing
- A19 Two simultaneous equations
- A22 Linear inequalities

#### 3. RATIO and PROPORTION

- R10 Direct and inverse graphed
- R16 Growth and decay

#### 4. GEOMETRY and MEASURES

- G1 Vertices; regular polygons
- G2 Perpendicular from point to line
- G3 Angle properties
- G4 Quadrilaterals
- G6 Pythagoras; isosceles triangles
- G7 Rotate, reflect, translate, enlarge
- G9 Circle properties
- G12 Cube, cuboid, prism, cylinder  
Pyramid, cone, sphere
- G13 3D shapes
- G16 Area and volume
- G18 Circle: arc length, sector area
- G25 Vectors: add, subtract, multiply

#### 5. PROBABILITY

- P8 2-dice simulation ('extras')

#### 6. STATISTICS

- S2 Frequency tables; charts;  
Line graphs for time series
  - S4 Continuous and discrete; median, mean,  
mode and modal class, and spread
  - S6 Scatter diagram; line of best fit
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### Higher Tier

#### 2. ALGEBRA

- A7 **Inverse function; composite function**
- A8 Coordinates and graphs
- A9  $y = mx + c$ ; parallel and **perpendicular**
- A10 Gradient and intercept
- A11 Roots and intercepts; turning points  
**Completing the square**
- A12 Linear, quadratic, cubic, reciprocal
- A13 **Translation and reflection of function**
- A14 Plotting graphs, including **exponential**
- A15 **Gradient of graphs; area under graphs**  
**Distance-time; velocity-time**
- A16 **Equation of circle; equation of tangent**
- A17 Solving an equation by graphing
- A18 Solving quadratic **by formula**
- A19 Linear/linear; **linear/quadratic**
- A20 **Solving by iteration**
- A22 Graphing inequalities: linear, **quadratic**

#### 3. RATIO and PROPORTION

- R10 Direct and inverse graphed
- R15 **Gradient at a point on a curve**
- R16 Growth and decay

#### 4. GEOMETRY and MEASURES

- G1 Vertices; regular polygons
- G2 **Constructions and loci**
- G3 Angle properties
- G4 Quadrilaterals
- G6 Pythagoras; Isosceles triangles
- G7 Rotate, reflect, translate, enlarge  
Negative enlargement factor
- G8 **Combinations of transformations**  
**invariance**
- G9 Circle: **tangent, arc, sector and segment**
- G10 **Standard circle theorems**
- G12 Cube, cuboid, prism, cylinder  
Pyramid, cone, sphere
- G17 **Formulae: circle, sphere, pyramid, cone**
- G18 Circle: arc length, sector area
- G25 Vectors: add, subtract, multiply; **translate**

#### 6. STATISTICS

- S1 **Population and sampling**
  - S2 Frequency tables; charts;  
Line graphs for time series
  - S3 **Grouped discrete/continuous data**  
**Histogram with unequal classes**
  - S4 Median, mean, mode and spread  
**Box plot; outliers**
  - S6 Scatter diagram; line of best fit
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