

Programme for Transition Year Higher Level Mathematics

2018 – 2019

Text and Tests 4

Algebra

- Substitution
- Simplifying algebraic expressions
- Adding algebraic fractions
- Factorising quadratic and cubic expressions
- Using factors to simplify algebraic fractions
- Linear equations (including equations with fractions)
- Quadratic equations
- Using the quadratic formula
- Simultaneous equations with two variables
- Simultaneous equations with three variables
- Solving quadratic and linear equations
- Algebraic division
- Factorising cubic expressions
- Solving cubic equations
- Changing the subject of a formula
- The laws of indices
- Equations involving indices

Coordinate Geometry of the Line

- Distance between two points
- Midpoint of a line segment
- Slope of a line
- Equation of a line
- Old book (Ex. 1.1 – 1.3, 1.6) or New book (Ex. 4.1 – 4.3, 4.6)

Trigonometry

- Revision of Junior Certificate higher level material

Christmas Exam - 1 hour

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Text and Tests 4

Trigonometry

- Sine rule – area of a triangle
(old book ex. 2.4 or new book ex. 3.4)
- The Cosine rule
(old book ex. 2.5 or new book ex. 3.5)

Coordinate Geometry of the Circle

- The equation of a circle with centre (0,0)
(old book ex. 4.1 or new book ex. 11.1)
- Equations of a circle with centres not at (0,0)
(old book ex. 4.2 or new book ex. 11.2)
- Finding the equation of a circle
(old book ex. 4.3 or new book ex. 11.3)
- Tangents to a circle (**when given a point on the circle only**)
(old book ex. 4.4 or new book ex. 11.4)
- Lines and circles (**intersection of a line and a circle only**)
(old book ex. 4.5 or new book ex. 11.5)

Statistics

- Revision of Junior Certificate higher level material
- Standard deviation (ex. 10.5 new book)
- Scatter graphs
- Correlation and Correlation coefficient

Summer Exam - 1½ hours