

Assessment Notification



Course	Year 10 Mathematics Pathway B
Task	Task 3
Date and time	Friday July 28- Week 2A
Time allowed	60 minutes (3 minutes reading time)
Weighting	20%
Nature of task	Written examination style task, calculators allowed. Each student is permitted to bring a sheet of A4 paper with one side of handwritten notes into the examination.
Topics and outcomes	Algebraic Techniques (MA5.2-6NA), Equations(5.2-8NA), Surds (5.3-6NA)

Topics content and text references Year 10 5.1-5.2 Pearson Text Chapters 2 and 5
Year 10 5.1-5.3 Pearson Text Chapter 5 Ex 5.02-5.04
Year 9 5.1-5.3 Pearson Text Chapter 7

Quadratic Expressions

Students can be asked to:

- Add and subtract algebraic terms
- Multiply and divide algebraic expressions
- Simplify division of algebraic expressions where factorisation is needed

- Expand brackets and simplify resulting expressions including negative expansions
- Factorise algebraic expressions using the HCF and including questions where a negative factor is the HCF e.g. Factorise $3x + 6$, $10x + 15$, $-7p - 14$ etc

- * Factorise algebraic expressions involving a difference of 2 squares e.g. $x^2 - 9$, $4x^2 - 25$, $9a^2 - 49b^2$

- * Factorise trinomial expressions e.g. $x^2 + 6x + 8$, $x^2 - 4x - 40$, $x^2 + 5x - 14$ etc.

- Expand binomials and the perfect squares e.g. $(x + 4)(x + 5)$, $(x - 5)^2$ etc

- Add and subtract algebraic fractions

- Multiply and divide algebraic fractions

Equations

Students can be asked to:

- Solve linear equations
- Solve linear equations with pronumerals on both sides of the equation
- Solve linear equations where expanding is needed to solve the equation
- Solve linear equations involving fractions
- Solve linear equations where fractions are on both sides of the equations
- Solve simple quadratic equations e.g. $x^2 = 16$, $4x^2 = 100$ etc

Continued overlap

Simultaneous Equations

Students can be asked to:

- Graph on a number plane 2 lines and determine the co-ordinates of the intersection point e.g. the intersection point of the lines $x = 2$ and $y = 3$, $y = x + 1$ and $y = 2x$, $x + y = 4$ and $x - y = 2$
- Solve simultaneous equations algebraically using the elimination method by first adding or subtracting the 2 equations e.g solve simultaneously $x + y = 2$
 $x + 2y = 3$
- Solve simultaneous equations algebraically by using the substitution method e.g. solve simultaneously $y = 2x + 1$ and $y = x - 3$

Surds

Students can be asked to

- * Simplify surds involving addition, subtraction, multiplication and division

e.g. $\sqrt{3} + \sqrt{3}$, $2\sqrt{5} \times 3$, $(4\sqrt{3})^2$, $\frac{5\sqrt{2}}{\sqrt{6}}$

- * Simplify surds e.g. $\sqrt{12} = 2\sqrt{3}$ and $\sqrt{50} = 5\sqrt{2}$ etc

Preparation

- Review class notes and work and use this to prepare the one side of A4 (handwritten) that you can bring into the assessment.
- Complete the revision sheets given and check your answers against the answers provided
- Study the outcomes listed above by reviewing the theory and working through relevant questions, seeking assistance where required.
- Bring all your equipment to the examination – calculator, pen, pencil, ruler, eraser