YEAR 10 – MATHEMATICS (Week 4)-2021-2022

Subject	Mathematics
Class/ Section	Year 10 – A-F
Week	19th September to 23rd September
Work send to students by	Google classroom
Total number of lessons per week	6
Unit/Topic	**Unit 9.3 Solving quadratic equations using completing the square** **Unit 15.3,15.4 Equations and Graphs**
Key Vocabulary	Completing the square,Parabola,Turning point, roots
Lessons 1-6 –Live Zoom lesson along with face to face instruction for students present on a particular day **Work will be assigned in google classroom which will be matched to the students ability.**	**Specific Learning objectives** ● Solve quadratic equations by completing the square ● Draw quadratic graphs. ● Solve quadratic equations using graphs. 　Identify the line of symmetry of a quadratic graph. ● Find approximate solutions to quadratic equations graphically. **Specific Intended Learning Outcomes** 　Students will be able to

Tasks/Activities	● Solve quadratic equations by completing the square ● Draw quadratic graphs. ● Solve quadratic equations graphically ● Identify the line of symmetry of a quadratic graph. . ● Display **Key point 1** to define the term 'solving' in this context. ● Display **Example 1** and **Key point 2** to explain that the solutions to a quadratic function are known as the 'roots'. If possible, use graphing software to display the graph of $y = x^2 + 2x - 8$ and show students the practical application of this (that the roots are the x-coordinates where the curve cuts the x-axis). ● Display **Key point 4** to define the term 'perfect square'. ● Display **Example 3** and **Key point 5** to show the process for completing the square, and the general format of the solution in algebraic terms. Allow plenty of time for students to practise this skill and build confidence before they use it to solve equations. Display **Key point 6** to show how to deal with coefficients of x^2 greater than 1. Again, introduce this slowly: work through an example from **Q11** and **Q12** together before giving students time to practise independently. **Complete the questions assigned from the Text Book – Edexcel GCSE (9- 1)Mathematics Higher Student Book and PPT** Students will be put in break out rooms during Zoom lesson to encourage collaborative learning
Assessment Criteria/ Essential questions	Essential Question that are according to the Pearson edexcel specification (a) Complete the table for $y = x^2 - 3x + 1$ | x	-2	-1	0	1	2	3	4
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y	11		1	-1		1	5	 (b) On the grid below, draw the graph of $y = x^2 - 3x + 1$ c) Use your graph to find an estimate for the minimum value of y. Assessment objectives expected by the board with respect to the above question is listed below.
Resources	AO1: Use and apply standard techniques AO2: Reason, Interpret and communicate mathematically AO3: Solve problems within mathematics and in other contexts.

	1. **Edexcel GCSE (9- 1)Mathematics Higher Student Book** 2. Ppt on the the topic