

# The Palmer Catholic Academy

## Sixth Form Transition 2021

### A Level Maths

Guidance / Instructions	Submission date	
Task 1 Algebraic Expressions: Complete the linked worksheets on 'Factorising', 'Indices' & 'Surds' on paper showing working.	<i>First Maths lesson in September 2021</i>	
Task 2 Quadratics: Complete the linked worksheets on 'Quadratic Equations' and 'Quadratic Graphs & Completing the Square' on paper showing working.		
Task 3 Graphs and Transformation: Complete linked worksheet on 'Graphs and Transformations' on paper showing working.		<i>KS5</i>
Task 4 Equations and Inequalities: Complete linked worksheets on 'Simultaneous Equations' & 'Inequalities' on paper showing working.		
Task 5 Straight Line Graphs: Complete linked worksheet on 'Straight Line Graphs and Equations' on paper showing working.		
Task 6 Circles and Midpoints: Complete linked worksheet on 'Circles and Midpoints' on paper showing working.		
Task 7 Algebraic Methods: Complete linked worksheets on 'Algebraic Fractions' & 'Algebraic Proof' on paper showing working.		

All work must be submitted to your A Level Maths teacher in September 2021

This work must be completed by both Internal and External student at KS5.

We look forward seeing you in September 2021!!

***Maths Department.***

# Maths

# Higher

# topics

A collection of handwritten mathematical formulas on a blue grid background. The formulas include a summation, kinetic energy, area of a circle, a linear equation, a differential equation, Newton's law of gravitation, and an improper integral.

$$\sum_{i=2}^5 i^2$$
$$E = \frac{1}{2}mv^2$$
$$A = \pi r^2$$
$$y = \frac{x^2}{4}$$
$$\frac{dy}{dx} = \frac{x}{2}$$
$$F = \frac{Gm_1m_2}{r^2}$$
$$\int_{-\infty}^{\infty} \frac{x^2}{4} dx$$

# **Welcome to the start of the course 2021!**

Follow the steps below to give yourself the best chance in succeeding!

## **1) Watch the videos and make detailed notes.**

All videos can be found here.

<https://sites.google.com/site/tlmaths314/home/gcse-to-a-level-maths-bridging-the-gap>

If you need further support, use Dr Frost Maths or Youtube to find the topic that you are looking for.

## **2) Complete all the tasks**

Allocate yourself 3-5 tasks each week from now. These should be completed on paper showing full workings after watching the video and making notes.

## **3) Submit the set of assignments to the A level teacher**

You must submit all your completed tasks to the A level teacher in your first maths lesson in the first week of September 2021.

## **4) Get ahead of the rest**

Download the following books on Kindle for free. These are fantastic resources that allow you to test and improve your skills ready for September.

<https://www.amazon.co.uk/Head-Start-Level-Maths-2017-2018/dp/1782947922>

<https://www.amazon.co.uk/Bridging-GCSE-level-Maths-Student/dp/0008205019>

Best of luck!!

# **WEEK 1**

## **ALGEBRAIC EXPRESSIONS**

- (1) FACTORISING ([CLICK LINK](#))
- (2) INDICES ([CLICK LINK](#))
- (3) SURDS ([CLICK LINK](#))

## **QUADRATICS**

- (1) QUADRATIC EQUATIONS ([CLICK LINK](#))
- (2) QUADRATIC GRAPHS AND COMPLETING THE SQUARE  
([CLICK LINK](#))

## **WEEK 2**

### **GRAPHS AND TRANSFORMATIONS**

- (1) GRAPHS AND TRANSFORMATIONS ([CLICK LINK](#))

### **EQUATIONS AND INEQUALITIES**

- (1) SIMULTANEOUS EQUATIONS ([CLICK LINK](#))
- (2) INEQUALITIES ([CLICK LINK](#))

## **WEEK 3**

### **STRAIGHT LINE GRAPHS**

- (1) STRAIGHT LINE GRAPHS AND EQUATIONS ([CLICK LINK](#))

### **CIRCLES AND MIDPOINTS**

- (2) CIRCLES AND MIDPOINTS ([CLICK LINK](#))

### **ALGEBRAIC METHODS**

- (1) ALGEBRAIC FRACTIONS ([CLICK LINK](#))

- (2) ALGEBRAIC PROOF ([CLICK LINK](#))

#### **Extra resources to extend your knowledge**

<https://sites.google.com/latymer-upper.org/year11maths-post-easter/session-1-polynomial-equations>

<https://www.resourceaholic.com/2014/10/bridging-gap-to-level.html>

<https://www.resourceaholic.com/2017/07/bridging-gap-revisited.html>

[https://drive.google.com/file/d/1cPEkuRNInWjGOQIBWxR0ti\\_OQOwaoVwH/view](https://drive.google.com/file/d/1cPEkuRNInWjGOQIBWxR0ti_OQOwaoVwH/view)

[https://s3-eu-west-1.amazonaws.com/aws-hegartymaths/resources/HegartyMaths\\_A\\_level\\_transition\\_skills.pdf](https://s3-eu-west-1.amazonaws.com/aws-hegartymaths/resources/HegartyMaths_A_level_transition_skills.pdf)

<https://www.mhchs.org.uk/a-level-bridging-work/124513.html>