Goals

* use algebraic methods and graphing software to identify the key features of polynomial functions
* sketch polynomials
* develop mathematical models using the above functions

This Week’s focus

Polynomials - graphing higher powers from factorised form, types of roots, shapes of functions, intercepts, odd and even powered functions, Polynomial algebra (+, -, x, divide, evaluate), polynomial long division

**Week**

**Term**

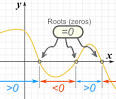
**2020**

15

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Goals

**Learning Brief SMM1: Polynomials**



Practical Components

Theoretical Components

*11 Methods Book*

*Ex 3B* Q1 a,b,c Q5 a,c

*Ex 3*D Q2 a,b Q5, Q6 a,d

*Ex 3*E Q2 a,d,g,h

*Ex 3*G Q1 a,h Q2 e,h Q3 g,j,k

*Ex 3H* Q3 pick any 2, then Q5 Q6 Q7

*Ex 3I* Q1 pick any 2.

**Resources:**

*PDF file* on Polynomials pages 1-13

Text book references: 11 Methods book (pdf)

Sections 2A, 3B, 3E, 3G, 3H, 3I

*Youtube*: links in the PDF file

**Knowledge checklist:**

* Polynomials - what are they?
* Extrema Values - know how to identify extrema behaviour by looking at the polynomial functions.
* Algebraic skills of factorising, to get polynomials into fully factorised forms so you can solve and identify the roots. Polynomial long division- essential algebraic skill for Specialist Mathematics. This link can help with long division: <http://calc101.com/webMathematica/long-divide.jsp#topdoit>
* Once you have found the roots, be able to identify their behaviour.
* From fully factorised form be able to sketch polynomials of degrees 3 and higher.



Investigation

See next page

See the next page

**Remember to scan in when you come to the Maths Area and when you leave.**   
If you wish to work elsewhere other than the maths open area or adjoining rooms you must discuss this option with Jacqueline.

Week 15 Investigation

Sort the statements below into a proof of the quadratic formula.

