

Polynomials of a higher degree (4F)

Wednesday, 28 February 2018 5:38 pm

Draw a diagram



Work to be completed once teaching has concluded:

Higher order polynomials	4F	2,3,4
--------------------------	----	-------

RECAP

We have, to date, been dealing with polynomials of degree 2 and, last lesson, degree 3.

Now it's time to move onto the next set of polynomials, those with degree 4 - otherwise known as quartics.

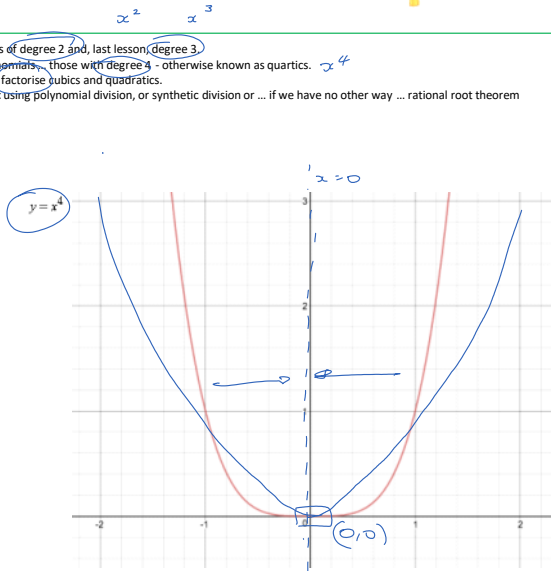
We now have a collection of tools to allow us to factorise cubics and quadratics.

The good news is ... the way we factorise a cubic using polynomial division, or synthetic division or ... if we have no other way ... rational root theorem ... works for quartics, quintics, and higher.

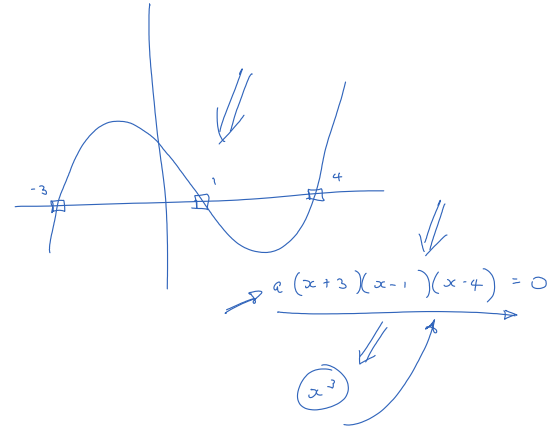
A gallery of gorgeous graphs

The first:

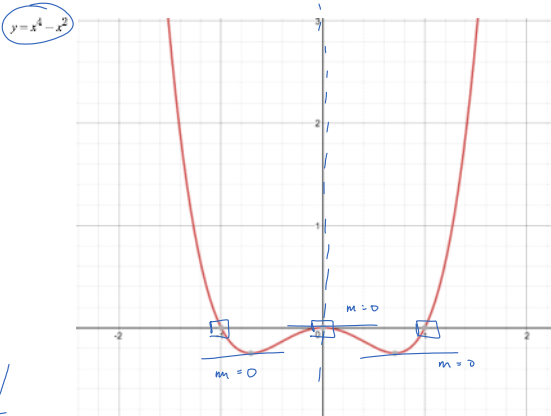
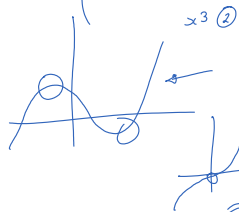
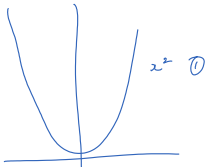
Desmos.com



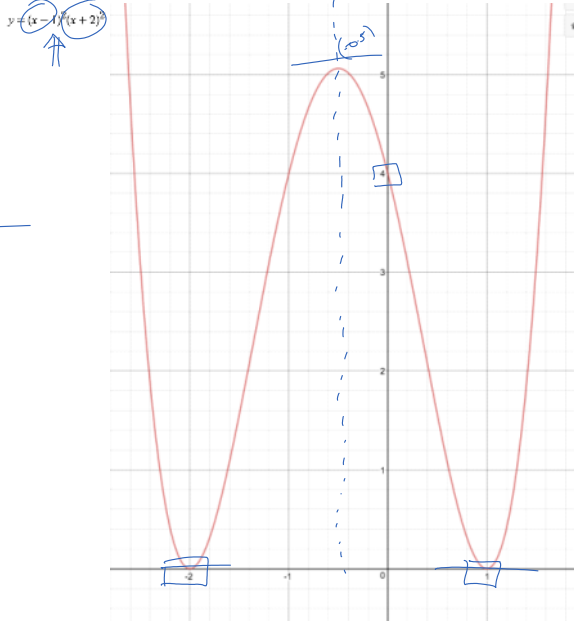
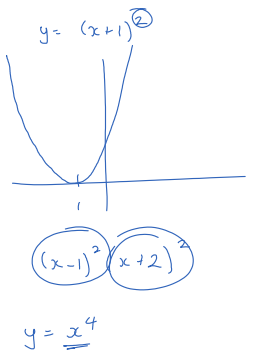
$$y = x^2$$



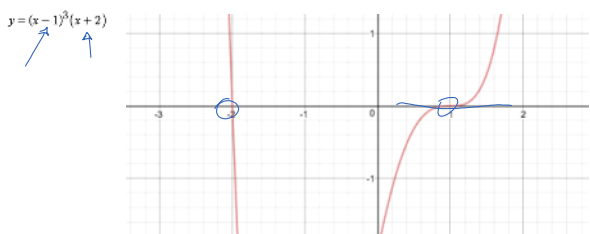
Another interesting one:



This one is really exciting:

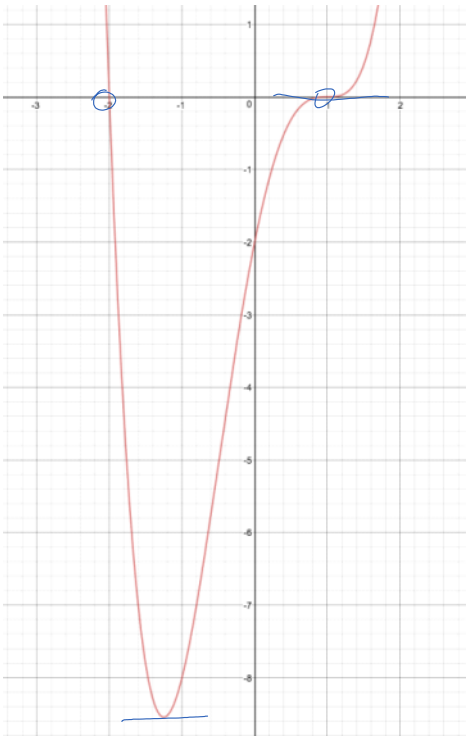


Let's take this to the bank:



Let's take this to the bank:

$y = (x-1)^3(x+2)$



Important things to know:

Quartic functions can have zero, one, two, three or four x-axis intercepts.
Quartic functions can have one, two or three stationary points.

