7C The Factor Theorem

1. Show that $(x-2)$ is a factor of x^3+x^2-4x-4 by:

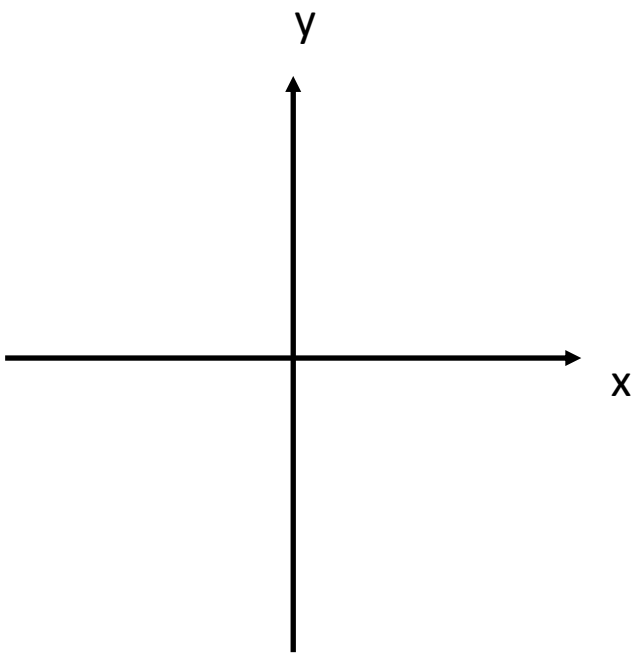
a) Algebraic division

b) The factor theorem

2.

a) Fully factorise $2x^3 + x^2 - 18x - 9$

b) Hence, sketch the graph of $y = 2x^3 + x^2 - 18x - 9$



3. Given that $(x + 1)$ is a factor of $4x^4 – 3x^2 + a$, find the value of a.