Show that $(x+3)$ is a factor of $x^{3}-3 x^{2}-10 x+24$ and hence factorise $x^{3}-3 x^{2}-10 x+24$ fully.

Answer:
Substitute $x=-3$, use synthetic division or use algebraic division to obtain the full factorisation of $(x+3)(x-4)(x-2)$.

