

## MA416 Weekly Challenge 8

Give an example (with explanation) of an irreducible polynomial of degree 4 in  $\mathbb{F}_2[X]$  (where  $\mathbb{F}_2$  denotes the field  $\mathbb{Z}/2\mathbb{Z}$  of two elements, the integers modulo 2).

Please upload your answer to the Canvas “Challenge 8” assignment by Friday November 29. You do not need to type it (a photograph is fine). Explain your example as clearly as you can, so that it would be interesting and informative for a reader. Cite any sources that you use.