MA416 Weekly Challenge 4

Give an example (with explanation) of a polynomial of degree 5 in $\mathbb{Z}[X]$ that is irreducible in $\mathbb{Q}[X]$ but does not satisfy Eisenstein's criterion.

Please upload your answer to the Canvas "Challenge 4" assignment by Friday October 25. 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.