Let $P(X)$ be a monic, quartic polynomial with integer coefficients. We suppose that $P(X)$ is irreducible and has a cyclic or dihedral Galois group. Then there exists $c_P > 0$ such that the largest prime factor of $P(n)$ is $> n^{1+c_P}$ for a positive proportion of integers n. This is a joint work with James Maynard.