

1116-11-1570      **Lola Thompson\*** (lola.thompson@oberlin.edu). *On the degrees of divisors of  $x^n - 1$ .*

We discuss what is known about the following questions concerning the degrees of divisors of  $x^n - 1$  in  $\mathbb{Z}[x]$ , as  $n$  ranges over the natural numbers:

1. How often does  $x^n - 1$  have **at least one** divisor of every degree  $1 \leq m \leq n$ ?
2. How often does  $x^n - 1$  have **at most one** divisor of every degree  $1 \leq m \leq n$ ?
3. How often does  $x^n - 1$  have **exactly one** divisor of every degree  $1 \leq m \leq n$ ?
4. For a given  $m$ , how often does  $x^n - 1$  have a divisor of degree  $m$ ?

This talk is based on several papers, including joint work with Paul Pollack, Carl Pomerance and Andreas Weingartner. (Received September 20, 2015)