

The Simplest Sextic Polynomials

$$X^6 - aX^5 - \left(\frac{5}{2}a + 15\right)X^4 - 20X^3 + \frac{5}{2}aX^2 + (a+6)X + 1, \quad a \in 2\mathbb{Z} - \{0, -6, 10, -16\}$$