**Pollard p – 1 Method.**

John pollard developed a method that finds a prime factor ‘p’ of a number based on the condition that p-1 has no factor larger than a predefined value ‘B’, called the bound.

**Example**

Use the Pollard *p* − 1 method to find a factor of 57247159 with the bound B = 8.

**Pollard p – 1 Method Continued**

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**Example**

Use the Pollard *p* − 1 method to find a factor of 57247159 with the bound B = 8.

**Solution** Factors for 57247159 = 421 × 135979

Note that 421 is a prime and *p* − 1 has no factor greater than 8

421 − 1=22 × 3 × 5 × 7

**Pollard p – 1 Method Example-1**

Use Pollard’s p-1 method to factor N=13927189. Starting with gcd(29!-1, N) and take successively large factorials in the exponent.

**Pollard p – 1 Method Example-1**

**Pollard p – 1 Method Example 2**

Factor the large number N=168441398857 using Pollard “p-1” method