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On Solutions to φ(n) + s= φ(n+ s)

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We investigate the set of solutions to $\varphi(n)+s = \varphi(n+s)$, where φ is Euler's totient function and s varies over the positive even integers. Our main theorems describe the effect of the factorization of s upon the type and abundance of solutions, and we prove in certain cases the nonsubstance of all or part of the solution sets. We generalize the question to the setting of polynomial rings, and confront some interesting transformations of the problem in that setting.