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Counting Solutions of $a^2 + pbc = 0$ in a Cube

For a prime p, let $s_p(n)$ be the number of integer triples (a, b, c) which satisfy $a^2 + pbc = 0$, where a, b, c are bounded by natural number n, and p is prime. Some sequences of this form have had limited numbers of terms contributed to the OEIS, while others have had no contributions at all. A non-recursive, generalized algorithm was theorized and developed, to produce the first n terms of the sequence relating to the equation $a^2 + pbc = 0$.