## Relations $\beta = f(\tau)$ in OEIS for squares A000290

Relations $\beta = f(\tau)$	Sequences of Integers in <b>OEIS</b>	Squares of Primes A001248 $\tau(p^2) = 3$	Squares of Composites A062312 \ {1} τ(m) >= 5	1 <sup>2</sup>
$\beta(m) = (\tau(m)-3)/2$	A326707	$\beta(p^2) = 0$ : A326708	$\beta$ "(m) = 0: A326709	X
$\beta(m) = (\tau(m)-1)/2$	A326710	$\beta(p^2) = 1$ : {121}	$\beta$ "(m) = 1: A326711	{1}

The sequences in OEIS about relations  $\beta = f(\tau)$  for squares are detailed in this array.

## Definitions:

 $\tau(n)$  is the number of divisors of the integer n: A000005.

 $\beta(n) = \beta'(n) + \beta''(n)$  is the number of Brazilian representations of n: A220136.

 $\beta\text{'}(n)$  is the number of representations of n of the form  $aa_b$  , but not  $11_b.$ 

 $\beta$ "(n) is the number of representations of n with at least three digits. These integers with such a representation are in the sequence A167782.

When m > 1 is square,  $\beta'(m) = (\tau(m)-3)/2$ , so always  $\beta(m) > = (\tau(m)-3)/2$ .

**Bernard Schott**