MODULUS FIELDS

e2PIi@subtract.one

$$\ell(n) = 11 \cdot 10^{n-2} \sum_{j=3}^{n} 10^{n-j}$$

$$\mathcal{M}(A) = \sum_{A \subseteq \mathbb{Z} | A \cap A = A} \frac{1}{9\ell(n)}$$

The ℓ function simply returns an integer $111 \cdots 1$ such that the length of the integer is $n + 1$. This is then used by the $\mathcal{M}$ function which constructs a repeating decimal over a distinct set of integers that actually counts the factorization over the set. For example:

$$\mathcal{M}(\{2,3,5\}) = 0.\overline{011112011202012102021102111103}$$

I believe there is an opportunity here to improve factorization algorithms as the generation of this modulus field is certainly in P, once the primes in the moduli set are decided upon based upon implementation requirements. In RSA's case we know the order of the primes that can be used as the key pairs since they want to create an xbit public key and the spec calls for minimum ybit private which places a well defined bound on the range. Assuming you could store/calculate the primes required to generate factoring an RSA Key would then certainly be P.