

Re: Probability of picking a positive rational number at random

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- *From:* quasi <quasi@xxxxxxxx>
 - *Date:* Thu, 13 Mar 2008 17:20:59 -0500
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On Thu, 13 Mar 2008 15:03:57 -0700 (PDT), S_Paske@xxxxxxxxxxxx wrote:

I am thinking that if i picked a random integer $n \geq 1$ i could use this distribution:

The probability of the exponent of its 2 prime factor=0 is $1/2$

The probability of the exponent of its 2 prime factor=1 is $1/4$

...

The probability of the exponent of its 3 prime factor=0 is $2/3$

The probability of the exponent of its 3 prime factor=1 is $2/9$

The probability of the exponent of its 3 prime factor=2 is $2/27$

...

The probability of the exponent of its n'th prime factor=k is $(P_n-1)/$

P_n^k

Each prime factor would be independent of the others.

It's not a valid distribution since, for every natural number n, the probability that the result of your proposed experiment yields the value n is 0.

quasi

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