

Re: About random, primes and statistics

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Knowing that statistics is an area of mathematics that physics students get rather familiar with I thought it'd be of interest to explain a simple area where mathematicians routinely lie—I think in order to keep research grants.

First you need to learn a bit of number theory, as $7 \bmod 3 = 1$, where 1 is the residue modulo 3, so the bit of math is that shown $x \bmod y$, you take $x - ky$ where k is the largest positive integer that will fit, and use what's left over, which is the residue.

I picked 3 because there is a fascinatingly boring thing about numbers modulo 3—perfect regularity:

Starting at 1 and counting up you have

1, 2, 3 followed by 4, 5, 6 followed by 7, 8, 9 on out to infinity

which modulo 3 gives

1, 2, 0 followed by 1, 2, 0 followed by 1, 2, 0 repeated on out to infinity.

(It's like a perfect waltz to infinity!!!)

That is an absolute and I'd say a trivial one at that but it will challenge everything you think you know about mathematicians as decent researchers as you have primes and you have composites and composites

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are products of primes—kind of like their children!—so if primes tended to pick a particular residue modulo 3, then composites would follow along!

But they don't. They split evenly between 0, 1 and 2.

Therefore, I strongly suggest to you, primes split evenly between having a residue of 1 and 2 modulo 3.

If that is true then the residue of a prime other than 3 modulo 3 will be random.

Here is what you get with the first 23 primes greater than 3:

$5 \bmod 3 = 2$, $7 \bmod 3 = 1$, $11 \bmod 3 = 2$, $13 \bmod 3 = 1$,
 $17 \bmod 3 = 2$,
 $19 \bmod 3 = 1$, $23 \bmod 3 = 2$, $29 \bmod 3 = 2$, $31 \bmod 3 = 1$,
 $37 \bmod 3 = 1$,
 $41 \bmod 3 = 2$, $43 \bmod 3 = 1$, $47 \bmod 3 = 2$, $53 \bmod 3 = 2$,
 $59 \bmod 3 = 2$,
 $61 \bmod 3 = 1$, $67 \bmod 3 = 1$, $71 \bmod 3 = 2$, $73 \bmod 3 = 1$,
 $79 \bmod 3 = 1$,
 $83 \bmod 3 = 2$, $89 \bmod 3 = 2$, $97 \bmod 3 = 1$

So the sequence is

2, 1, 2, 1, 2, 1, 2, 2, 1, 1, 2, 1, 2, 2, 2, 1, 1, 2,
1, 1, 2, 2, 1

and I suggest to you it is random, like flipping a coin, but better as it is absolutely random.

Now then what if it were NOT random so that there was some pattern in there?

Well, composites are products of primes, so where primes go, so do the composites, so if primes tended to have say, a residue of 1 modulo 3, then so would composites, like $7 \cdot 13 = 91$ and $91 \bmod 3 = 1$.

If there were some more hidden pattern, for instance,

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when I've brought this subject up before sci.math'ers would claim that if 1 tends to be followed by 2 and 2 by 1 and they produced statistical tests claiming those proved that, then the sequence is not random!

But if 1 tends to be followed by 2 and 2 by 1, how would they push the composites? Into what pattern?

Now then, let's leap forward and say you accept that the rigidity of the ordering of counting numbers, where you have

1, 2, 3 followed by 4, 5, 6 followed by 7, 8, 9 on out to infinity

which modulo 3 gives

1, 2, 0 followed by 1, 2, 0 followed by 1, 2, 0 repeated on out to infinity

convinces you that primes other than 3 modulo 3 give a random distribution, why should anyone care?

Well, random is useful in physics but more intriguingly, if you accept that then you end a lot of research paths in modern mathematics!!!

Because if you push the argument to $p_1 \bmod p_2$, where the p 's are differing primes, then it turns out some supposedly big questions in modern math, like the Twin Primes Conjecture are easily answered!

But there are mathematicians getting federal funds for research in those areas, if random is the call then those funds cease.

BUT if no one notices, those mathematicians can work endlessly in an area where they can never get an answer, at least not a correct one.

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That is a highlight of how you can find controversy
in the math field
in a simple area where you can run your own
statistical analysis to
see.

Oh yeah, and remember a while back the math awards
where one guy
famously refused to accept his, while the others did
accept?

Well, if primes are random then one of those people
won a prize for
supposedly innovative research into an area where no
pattern actually
lies.

Maybe you believe I'm wrong and there is some hidden
pattern in primes
modulo 3, or more technically

$p \bmod 3$

with p not equal to 3, as you go out to positive
infinity.

I've given the beginning of the sequence:

2, 1, 2, 1, 2, 1, 2, 2, 1, 1, 2, 1, 2, 2, 2, 1, 1, 2,
1, 1, 2, 2, 1

where the start was the number 2 which has itself as
a residue modulo
3.

In answering my bringing this issue up before posters
on sci.math
claimed that this area has been checked and that
statistical analysis
proved non-randomness but there is no why here given.

Why would primes care? Especially when their
products, the composites
can't swing one way with the primes swinging another?

I suggest to you that math people lie in this area,
where you can do
the statistical analysis yourself to see that they
lie, or I'm wrong.
I've been wrong before, but I don't think I'm wrong
here.

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I know people lie. And I know some of you in the physics field who like to play with statistics can crank up some machinery and play with primes to see for yourself.

Remember, BIG research grants are wrapped up in this where some mathematicians have worked in this area for decades, so their entire livelihoods are about it NOT being true that $p \bmod 3$ is random.

Their entire LIVES are about that not being true, so they are totally invested.

James Harris

There is a controversial person on this forum who has factored both primes and composites mod primes.

What you have said is already known to him.

If i say "not popular" "cantor critic" and "factoring tricks" you should know who i mean.

He is "the One".

No offense but he is way ahead of you.

He already pointed this out months ago.
Even told you to look at his factoring tricks.

And he also has pointed out lies of the math community.

Not based on ignorance but economics (fundings) and media (hyping cantor e.g.).

I dont want to compare you both to much.

But this post clearly makes that indication.

However he accepts the "order" of Riemann into the primes.

Im not sure if you accept Riemann as a great mathematician or accept RH.

He does.

Consider him.

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Consider "The One"

john

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