From 1 to 1,000,000

📅 November 14, 2014   By Tim Urban

Look. I don't know what you're over there thinking about. It could be simple or sophisticated, mundane or whimsical, practical or creepy.

But I'm over here thinking about numbers. Again.

I've never been especially impressed by words. They're mushy and sometimes pleasant and sometimes annoying. They're subtle and subjective and rambly and flowy. Words are okay. Whatever.

But numbers. Numbers are fascinating and precise and satisfying and delicious and whatever it is you're thinking about at any given time, there's at least a 60% chance that I'm over here thinking about numbers.

So I've decided to do not one, but two consecutive posts on numbers, during which we'll start at 1 and end up in a very scary place. Today, we'll keep things in the realm of the ordinary and the conceivable, capping ourselves at a million.

The numbers between 1 and 1,000,000 are everywhere in daily life. 1, 10, 100, 1,000, 10,000, and 100,000 are our friends—we get them, they get us, and in this post, we're basically gonna just hang out with them and catch up, since you probably haven't been good at keeping in touch.

Let's start at the beginning—

One-Digit Numbers

We'll lead off with the extraordinarily dull 1.

<div align="center">

1 dot

·

</div>

1 likes to masquerade as this poetic and profound thing, getting used in sentences I don't really understand, like "the oneness of all" or something annoying like that. But then anytime you actually spend time with 1, you end up bored.

1 is also no fun to play with. Multiplying or dividing things by it is an incredibly underwhelming experience, and it manages to be such a dud that somehow, it's not a prime number even though it only has one factor.

As for the rest of the one-digit numbers, I enjoy 2, 4, and 8 because when I was seven I became obsessed with saying "2, 4, 8, 16, 32, 64, 128, 256, 512, 1,024, 2,048, 4,096" before hitting a wall, [1] and I have an affinity for prime numbers, naturally, so 3, 5, and 7 fall into my favor. Not thrilled with 9, but at least it's a perfect square. The only thing 6 offers my life is annoying the shit out of me every time I have to tell someone my phone number—(xxx)-666-xxxx—and they can't help but have some reaction to that and then we end up in this little song-and-dance interaction about it. [2]

Let's move on.

Two-Digit Numbers

10 dots

··········

Getting to the two-digit numbers, interesting things finally start happening. 10 itself is a big one, because our entire base ten existence stems from it. Why did we end up in base ten (instead of something like base 8, which would go 1, 2, 3, 4, 5, 6, 7, 10, 11, 12, 13, 14, 15, 16, 17, 20, etc.)? Because we have 10 fingers. It seems intuitive that only with base 10 could you multiply and divide so easily and simply add zeros or move a decimal point when shifting by multiples of 10, but that would be the case with any number system. [3] Let's look at some bigger numbers—

12 has the dozen thing going which is something, as well as factors up the dick. It's also the number of people who have been on the moon.
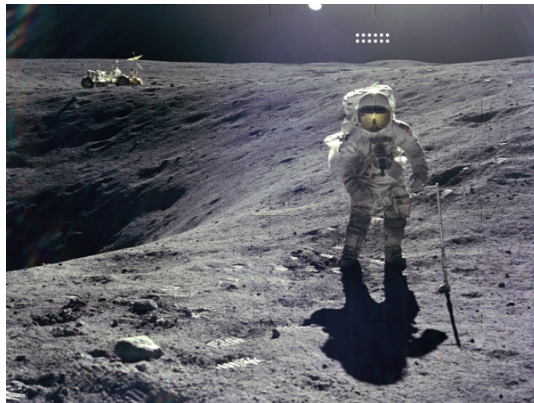

Let's pause for a second to acknowledge how *ridiculously* impressive it is that humans got humans *onto the moon and safely back.* And how *lucky* are those 12 guys? Could any life experience be more desirable than getting to bounce around the moon while looking at the Earth hovering out there in space?

Continuing along, I don't know whose sister 13 slept with, but somewhere along the way it pissed off the wrong person and managed to become the only number with a legitimately bad reputation.

20's worth mentioning just because I read during my research that only about 1 in 20 men in the US is 6'2″ or taller. So if you're 6'2″ or taller, you're the tallest of this average sampling of 20 American men—
[4]

An average sampling of 20 American men

Only one is 6'2" or taller

waitbutwhy.com
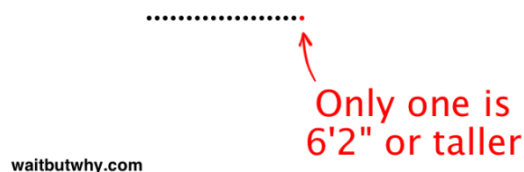
33 is relevant because of Larry Bird and because that's what I turned on Wednesday thanks for wishing me a happy birthday none of you.

You might be surprised to know that only 1/43 Americans openly identifies as gay, lesbian, or bisexual, but that when asked in an anonymous and veiled survey, that number jumps to 8/43:

1 in 43 Americans identifies as gay, lesbian, or bisexual

But when asked on an anonymous and veiled survey, that number jumps to 8 in 43
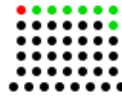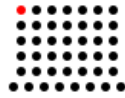
waitbutwhy.com

There are 41 Disney princesses and 48 real-life princesses, none of whom is Kate Middleton.

48 real-life princesses

waitbutwhy.com

Not much else happening with the two-digit numbers until we arrive at sleazy 99, the price tag whore who's made its whole living being the guy next to 100.

Three-Digit Numbers

100 dots

100 is a big deal and clearly knows it, but that's fair. It's the first three-digit number, but in our world, 100's main role is being the overlord of the one and two-digit groups—it's a century of years, the official "okay you win" age to reach, and the whole concept of percent is just comparing a part of 100 to all of 100. 100 is also a perfect square of another one of these fundamental numbers (i.e. 10, 100, 1,000, etc.), which is satisfying.

Being in the top 100th of a group in some way is also a thing. It looks like this:
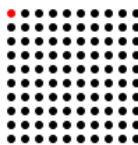
If you're in the red dot when it comes to wealth, you're the notorious *1 percent* and a lot of people will make signs that are mean to you. To be in the red dot among Americans, you need to make almost $400,000/year, but only about a tenth of that ($39,000 in 2011) to be in the red dot worldwide.

On the SAT, you'd be the red dot if you scored a 1480 out of 1600 or a 2200 out of 2400, and on the ACT, you'd need a 33. A Stanford-Binet IQ of 137 will make you the red dot too and would mean 99% of people are stupider than you. [5]

After 100, we're about to get into superbly random number territory, but first we hit 101, a C-list number celebrity for a handful of small claims to fame, like 101 Dalmations and beginner courses and the West Coast US highway.

Continuing along, while about exactly 1 out of every 100 dots speaks sign language (70 million people worldwide), [6] 1 of every 179 living humans (39 million) is blind:
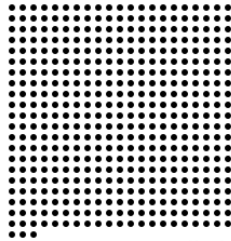
1 of every 179
humans is blind
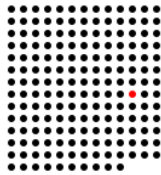
waitbutwhy.com
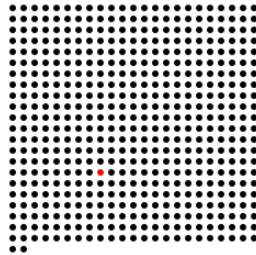
There are 444 Apple retail stores in the world:

444 Apple retail stores
in the world

waitbutwhy.com

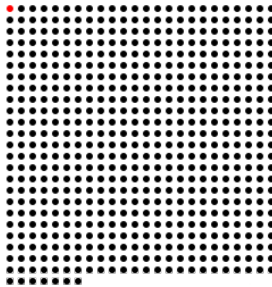If you deal five cards 508 times, you'll average one flush:

508 five_card draws
1 flush

waitbutwhy.com

And there are 12 million US dollar millionaires in the world, or 1 out of every 583 people. If your total assets (in excess of your total liabilities) add up to over $1,000,000, you're the red dot in this diagram:
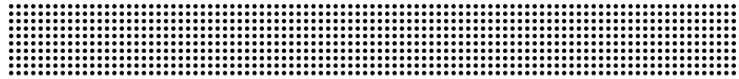

1 of every 583 people
is a millionaire

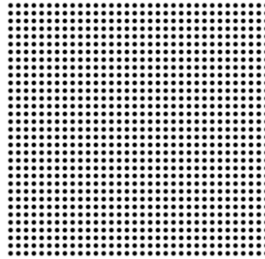waitbutwhy.com

Four Digit Numbers

1000 dots

1,000 is also a huge deal in our world and has a bunch of nicknames, like a grand, a G, a kilo, and k. It's also part of the elite chain of numbers in the "order-of-magnitude" chain, which we know as million, billion, trillion, etc. Million is actually the third number in that chain, with the dud 1 as the first number and 1,000 as the second number. And 1,000 is the key multiplier that defines the whole chain.

That said, 1,000's dirty secret is that it's a fraud like 10 and can't be made into a square. The square root of 1,000 is an embarrassing 31.62277660168 *etcetera* without even a vinculum. [7]

Anyway, let's look at some four-digit numbers and odds:

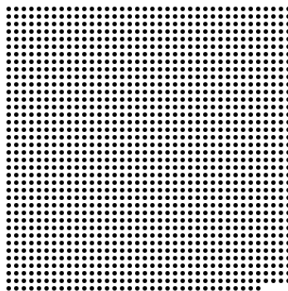Here's how many times a neutron star spins around every *second*:

A neutron star spins around 1,122 times every second

waitbutwhy.com

And here's how many minutes there are in each day:

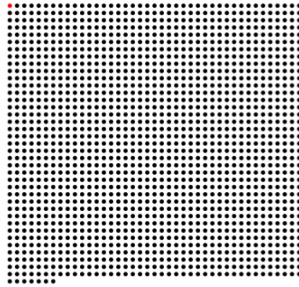## 1,440 minutes a day

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A genius-level IQ of 150 will earn you red dot status on the thousand-dot intelligence diagram, but that doesn't mean you got a perfect 1600 on the SAT—only the red dot in a 1,489-dot sample aces the SAT:
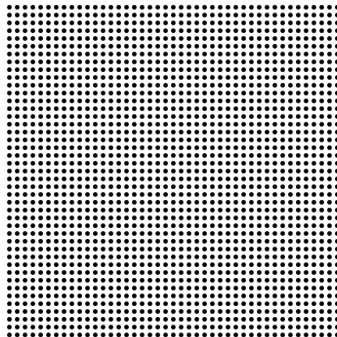
Only 1 out of 1,489 people
gets a 1600 on the SAT

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There are 1,811 large US corporations (over 10,000 employees), and astronomers have identified 1,849 planets outside our solar system:
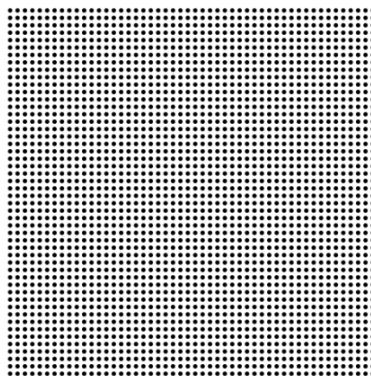
Astronomers have identified
1,849 exoplanets

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On a perfectly clear night, we can see about 2,500 stars in the night sky:

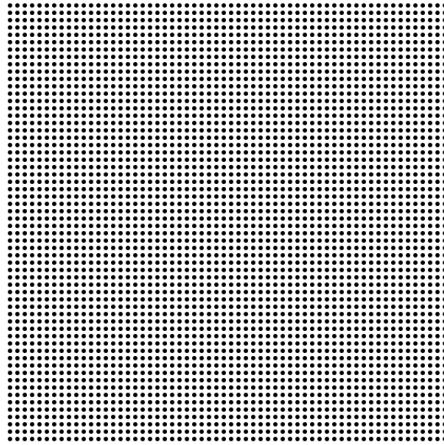## On a perfectly clear night,
you can see about 2,500 stars

waitbutwhy.com

And there may be only 2,800 living people over 7 feet tall (213cm), but they each have a 17% chance of making the NBA.

Here are all the seconds in an hour:

3,600 seconds in an hour

And here's the number of religions in the world:

4,200 religions in the world
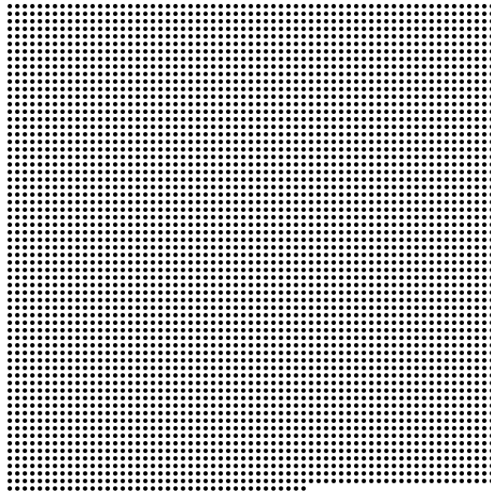
So there are more religions than the stars we see in the night sky, and you could name a religion every second and it would take you over an hour to name them all.

We've identified over 400,000 species of beetle in the world, but only 5,416 mammal species.

And here's how many living languages there are in the world:

6,500 living languages in the world
(2,000 with under 1,000 speakers)
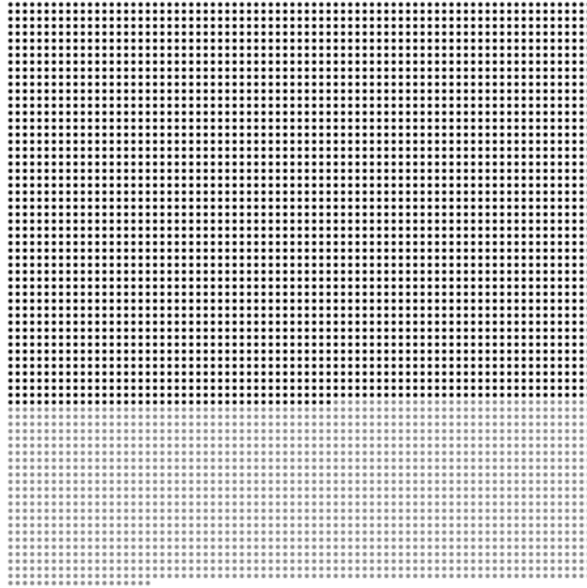
Finally, this is how many medium-sized (.5mm in diameter) grains of sand you could fit in a cubic centimeter box:

You could fit 8,000 grains of sand in a cubic centimeter
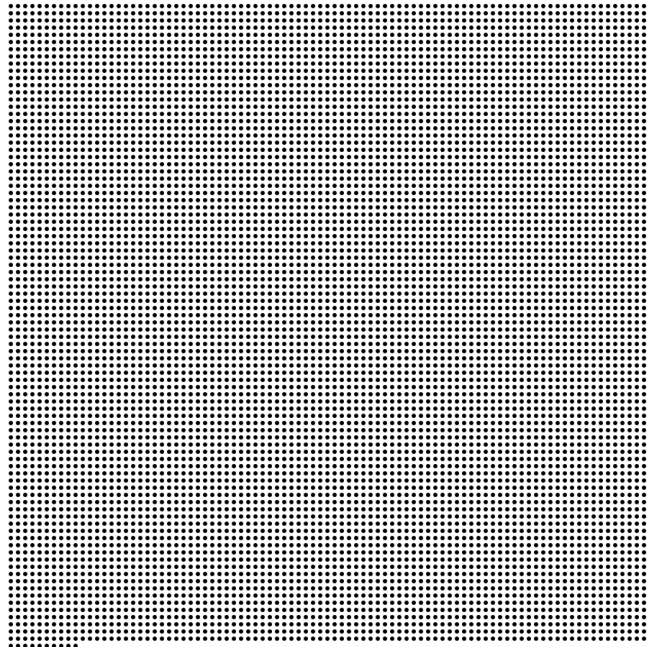
Five-Digit Numbers

10,000 dots
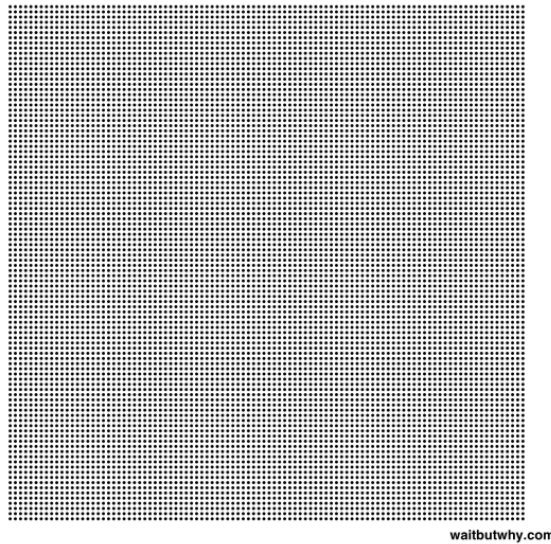
If 1,000 is a little overrated, 10,000 is underrated. No one talks about 10,000, but unlike the square rootless 1,000, 10,000 a perfect square of 100 100s, and 1% of a million.

Stephen Hawking's IQ is supposedly 160, which would *just* qualify him to be the red dot in a 10,000 dot average sample of human intelligence. And just so you know, in an average group of 17,000 people, one will be an albino.

This is how many people fit in a sold-out Fenway Park:

This is how many people sell out Fenway Park (37,493)
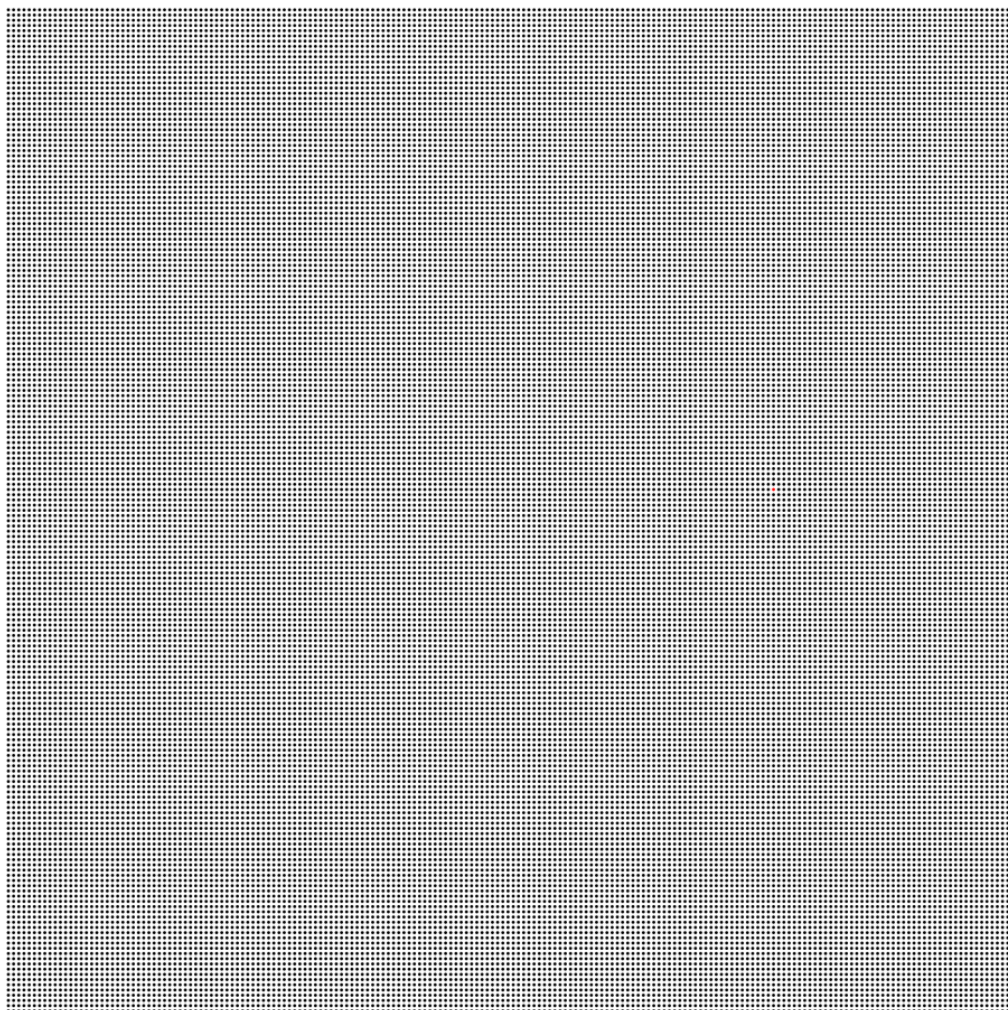
Larger than the number of people in Fenway are both the 41,821 airports in the world and the number of buildings in Manhattan:

47,000 buildings in Manhattan
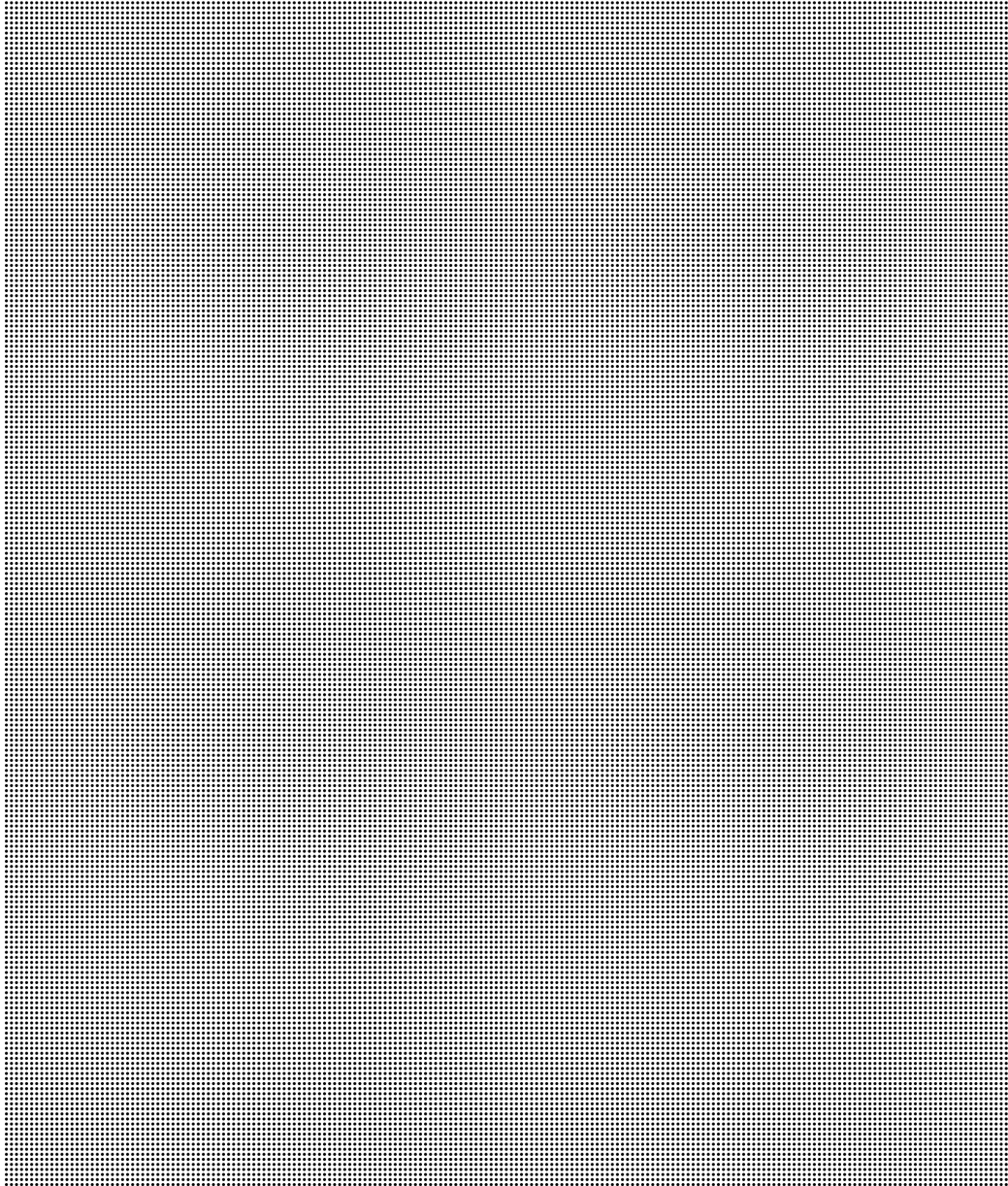
The 55,030 Google employees would fill up a large stadium, as would Apple's 50,250. Facebook is considerably smaller, with a staff of 8,348, while Wikipedia is running with only 208 people. You could fit the Craigslist team in a small bus:

Craigslist has about
40 employees

And here's how many seconds tick by every day:

86,400 seconds in a day
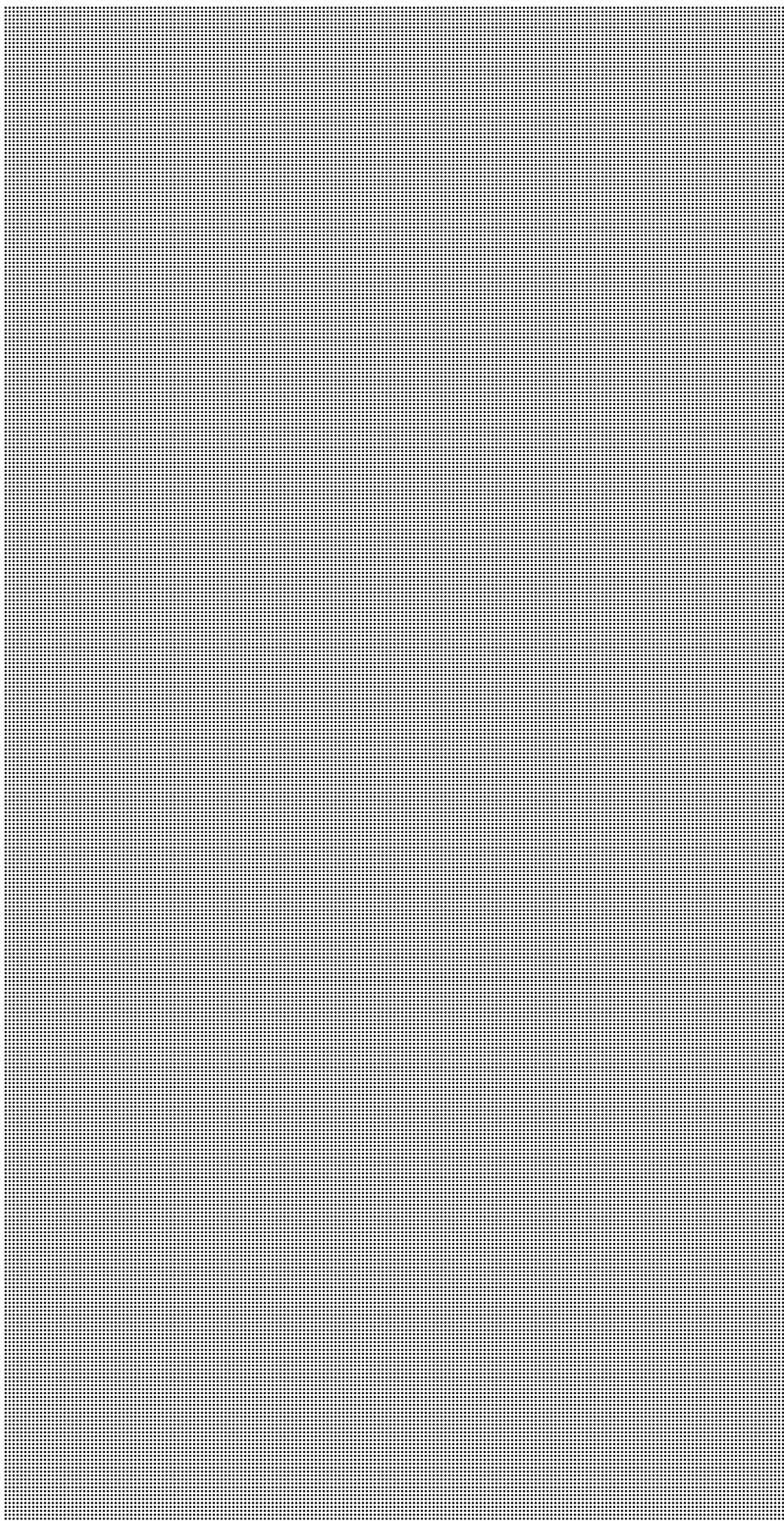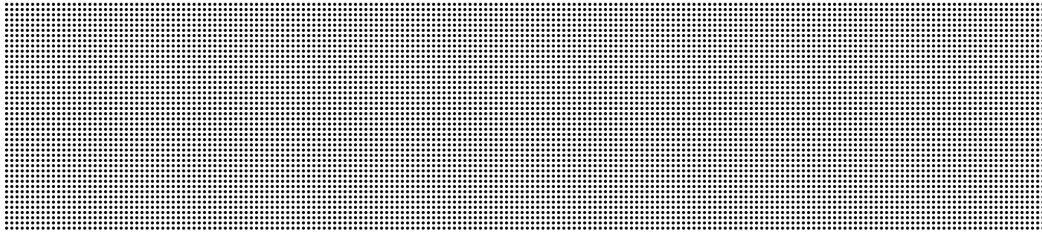
Six-Digit Numbers

100,000 dots
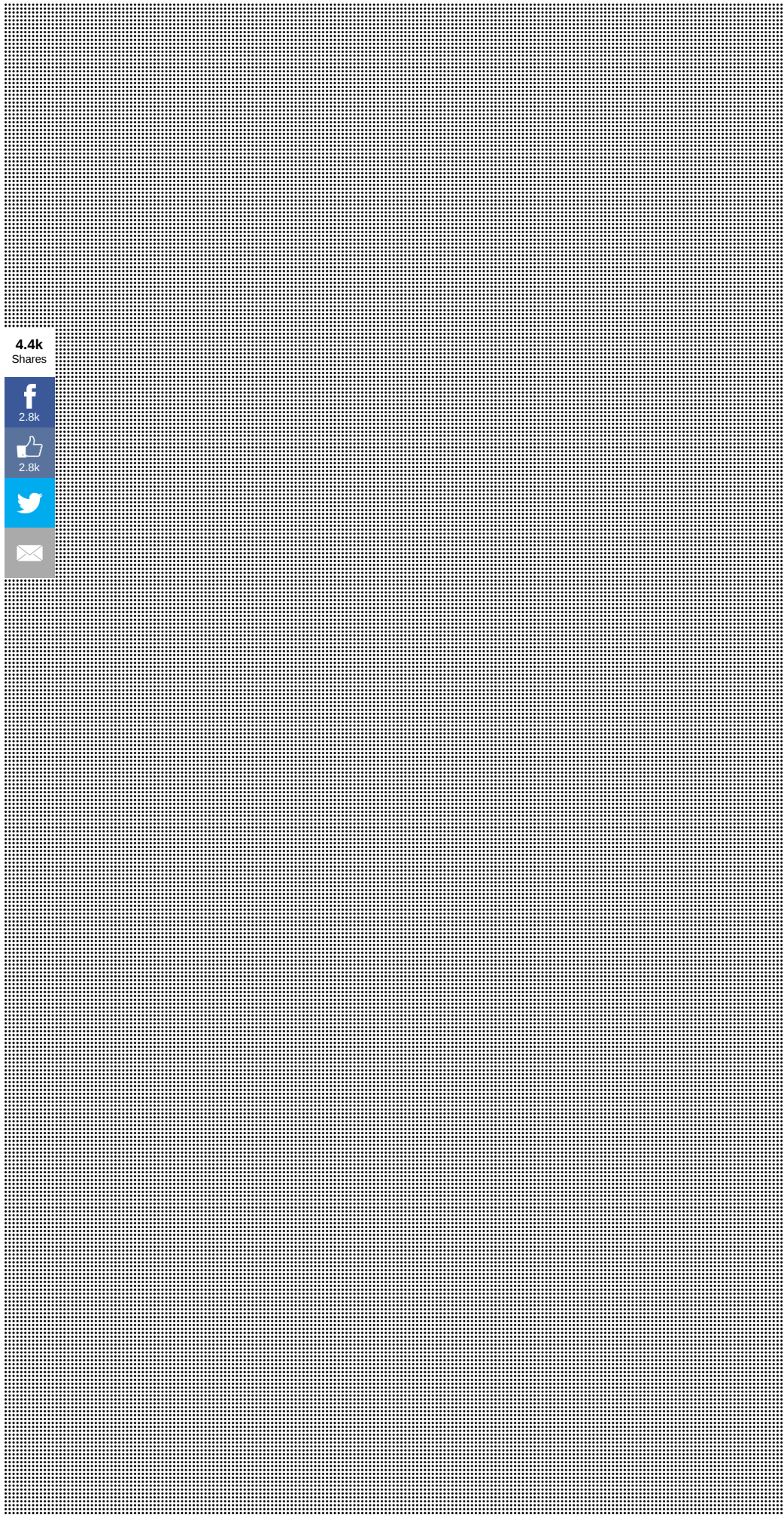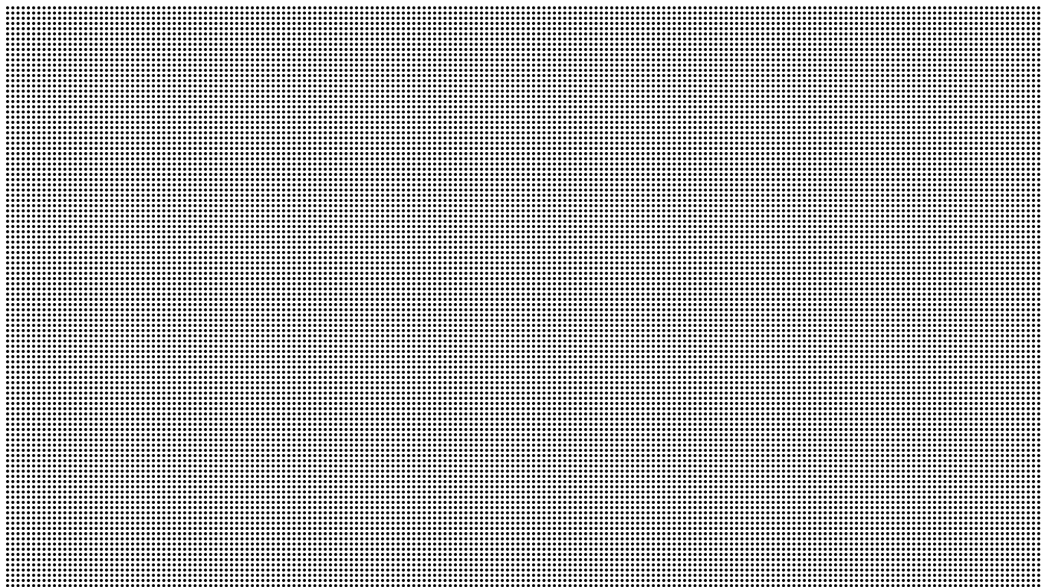
100,000 is the most random main category number of this post. In life, it mostly comes up as a salary most people would really like to be making. It's also getting very close to the largest number of people I can actually picture all together in one place. Michigan Stadium (The Big House) is just under 110,000, and the largest stadium in the world is India's Salt Lake Stadium, with a capacity of 120,000. North Korea claims that its Rungnado May First Stadium holds 150,000 people, but North Korea also says that Kim Jong Il shot 11 holes-in-one on his first time trying golf so we'll be sticking with Salt Lake Stadium as the world's largest. [8]

Equal to the capacity of the world's largest stadium is the number of abortions that happen in the world every day, on average:

120,000 worldwide abortions a day
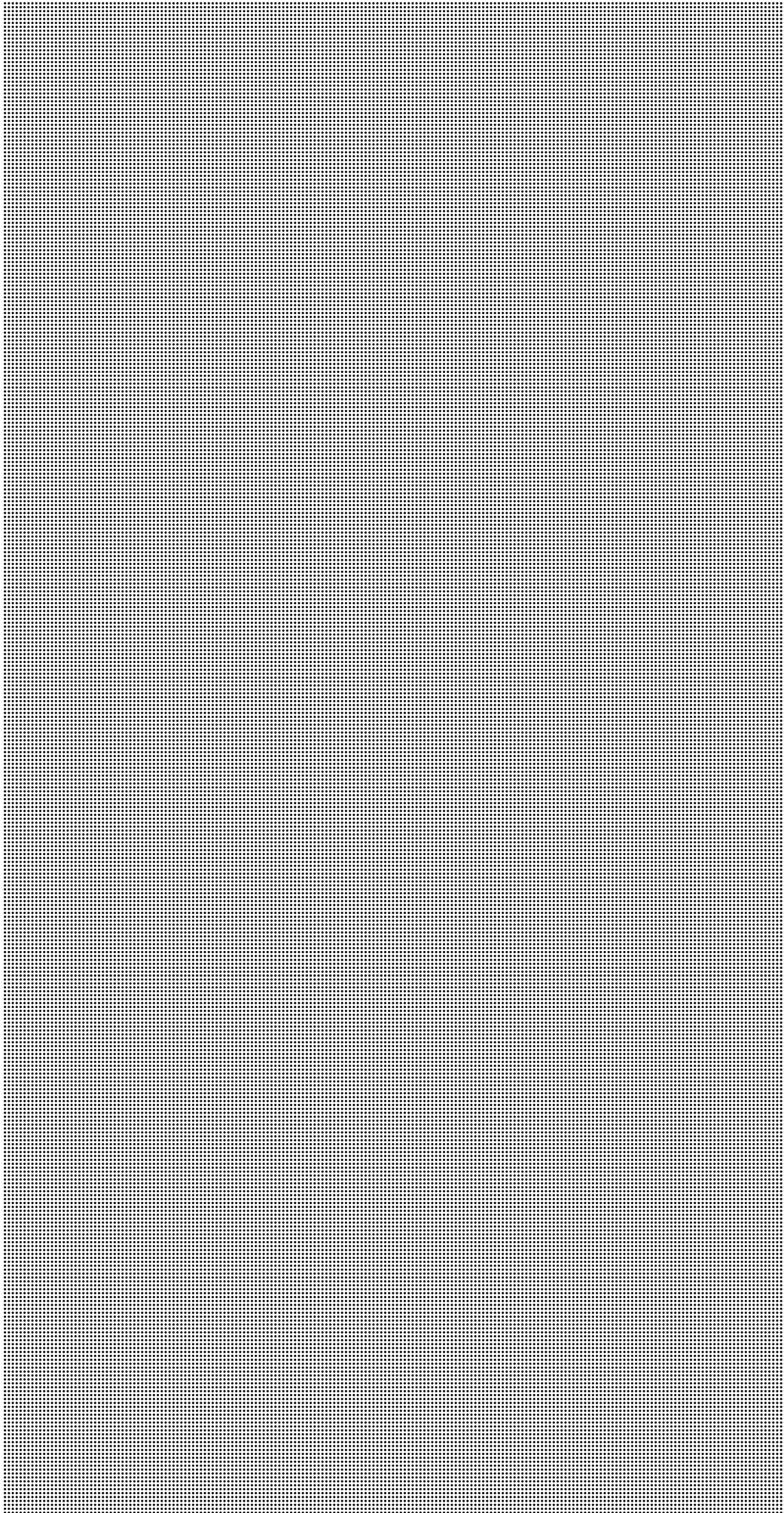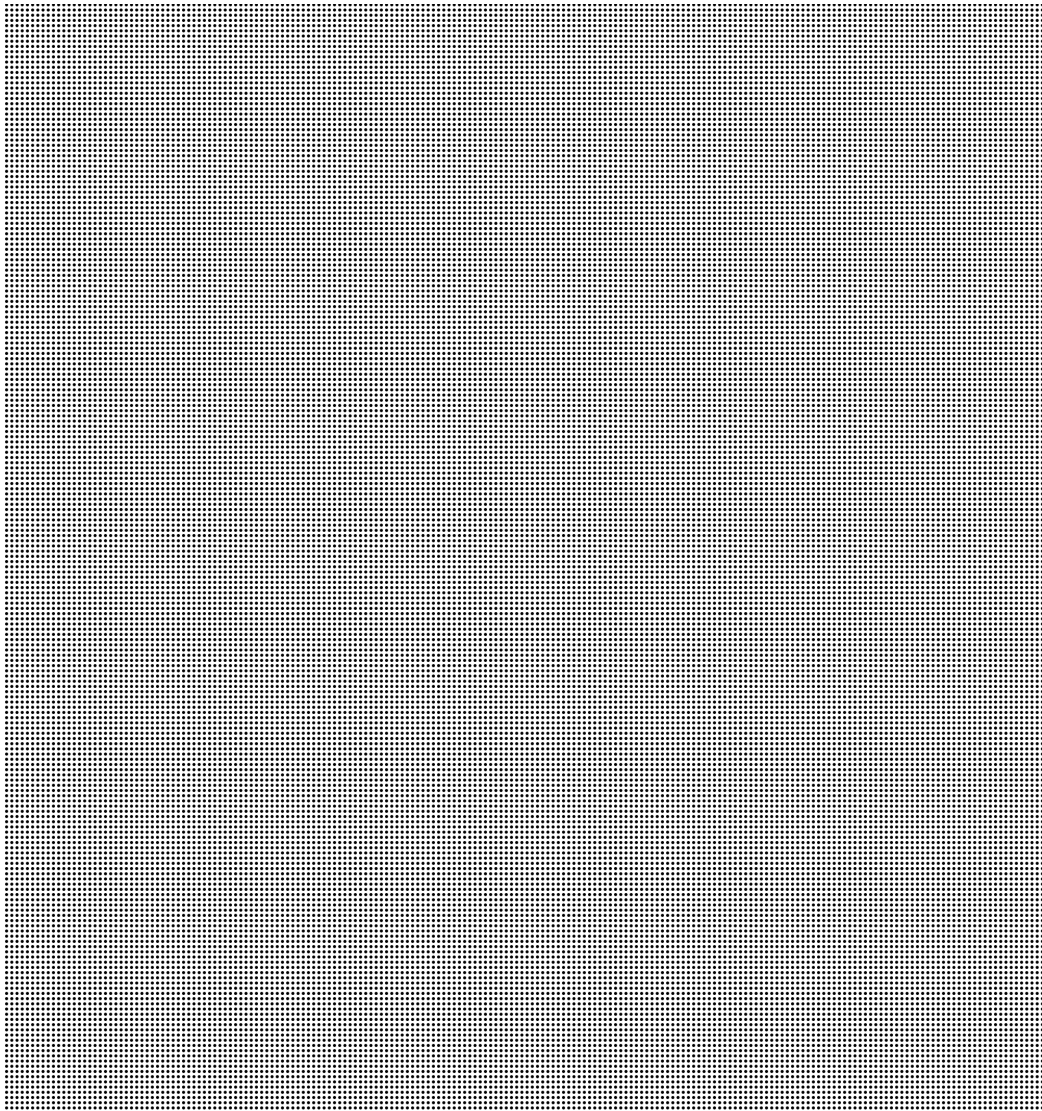
That's about 1/3 the amount of worldwide births per day, meaning a quarter of all pregnancies that don't end in miscarriage end in abortion. That's about the same as the rate in the US, but in New York City, 41 of every 100 non-miscarried pregnancies are aborted. And no, this isn't meant to be a political statement of any kind, just an interesting (and to me, surprising) statistic, so just settle down.

One Million

Good luck. See you at the bottom—

100,000

200,000

300,000

400,000

500,000 —

600,000 —

700,000 —

800,000 —

900,000 —

Sorry. A million dots is a lot of dots.

And how small are one-in-a-million odds? How much of a long shot is one-in-a-million? Just try to find the red dot in the million dots above.

This image is the only way I can think of to visualize what a million or what one-in-a million actually means.

A million is interesting because it's *huge*—but it's also the smallest of the big boys, *just* small enough that you can still picture it or depict it on a diagram. It's right on the border between the world we can wrap our heads around and the world of the totally inconceivable.

That red dot, if you found it, is a good thing to keep in mind next time you buy a 1-in-146 million Powerball ticket, or anytime you hear facts like one out of every 11 million airplane flights crashes. A one-in-a-million long shot is the same as rolling three 100-sided dice and trying to hit the number 63 *with all three of them in one roll*.

If you want to play around with taking a one-in-a-million shot at something, pick a number between 1 and 1,000,000, say it out loud, and then click Generate below and try to hit it (or two other ways to do it: 1) Change the max number to 1,000 and try to hit the number you say with the next two clicks; 2) Change the max number to 100 and try to hit a chosen number three times in a row):

True Random Number Generator
Min: 1
Max: 1000000
Generate
Result:
Powered by RANDOM.ORG

The Million-Dot Poster

I like both the number 1,000,000 and the number 1/1,000,000, and I love any chance to visualize them. A blog post that can only fit 200 dots horizontally isn't an ideal way to visualize a million because it makes a 1 x 25 rectangle you have to scroll down for an hour to see all of. So we've made a million-dot poster.

The poster is, satisfyingly, a square. A 24″ x 24″ (61cm x 61cm) poster with a 1,000 dot x 1,000 dot square of a million total dots. This allows you to most effectively visualize the number one million (it also helps to visualize 5 or 10 or 100 million, or even a billion, by picturing multiple posters next to each other).

And, of course, one of the dots is red. It takes a hunt to find it, [9] but once you do, you can understand exactly what 1/1,000,000 means. So one poster, two extreme numbers to visualize. You can check it out here.

Here's what the plain one looks like:

Full poster:
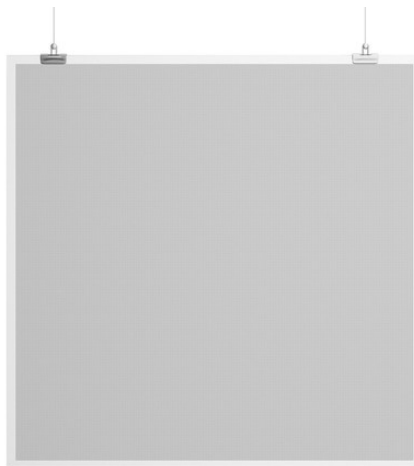
A closer shot, showing the red dot in the middle:
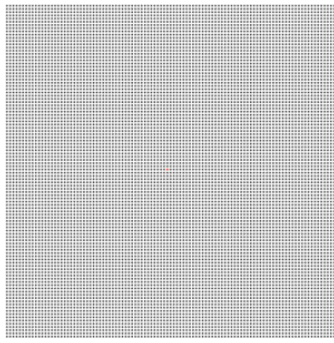
And a close-up shot, showing the red dot:
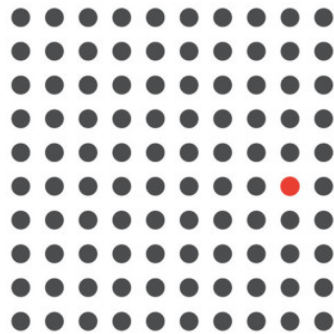
Numbers post #2: From 1,000,000 to Graham's Number

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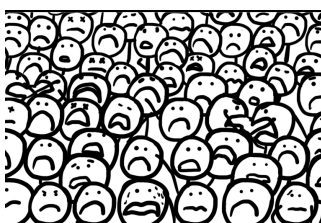
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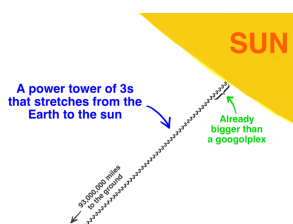
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                          │ Name   │
                          └──────────────────────────────────┘

dittoheadadt • 16 days ago
Every once in a while I see the billion/trillion seconds meme.

A billion seconds ago was roughly 32 years ago. A trillion seconds ago was 32 *thousand* years ago. A trillion seconds ago, there was no written history. The pyramids had not yet been built. It would be 10,000 years before the cave paintings in France were begun, and saber-toothed tigers were still prowling the planet. Yeesh.

⌃ | ⌄ • Reply • Share ›

dittoheadadt • 16 days ago
"Just try to find the red dot in the million dots above." I'd bet my mortgage (not my house; just my mortgage) that literally everyone who read that line scrolled back up at least once to try to find it. I scrolled up once and back down once, and failed.

As Ahnold said (or was it MacArthur?), "I'll be back."

⌃ | ⌄ • Reply • Share ›

DANL • 2 months ago
next step, visualize avogadro's number:

6.022140857 × 10^23

or total possible combinations of 256 bits:

1.1579 × 10^77

⌃ | ⌄ • Reply • Share ›

the victim • 3 years ago
4 digit numbers? 1,000 dots? how about 9,999 dots? Plus 0000?
5 digit numbers? 10,000 dots? how about 99,9999 dots? plus 00000?
can you show us the dots for the national debt? 19 trillion dots?

1 ⌃ | ⌄ • Reply • Share ›

> **Flamrpunch127** ➜ the victim • 5 months ago
> 19 trillion would belong in the "one million to grams number" post
>
> ⌃ | ⌄ • Reply • Share ›

Mark Monnin • 3 years ago
I'm trying to figure out who the 41 Disney princesses are... Wikipedia has a list of 11 with the 2 from Frozen soon to join, which would make 13. Does 41 include other female characters like Alice (in Wonderland), Minnie Mouse, and Esmeralda?

1 ⌃ | ⌄ • Reply • Share ›

David D. • 3 years ago
I did the exact same doubling from 2 thing when I was younger, and it made my day to know I'm not the only one.

I'm not sure if you know about this, but here is a fascinating tool to compare the size of things in the universe: http://htwins.net/scale2/

Another thing that really fascinates me is the number e. It seems like the closest thing to a perfect number. If you ever get the chance I would love to see a post about it!

⌃ | ⌄ • Reply • Share ›

Austin M. • 3 years ago
Holy crap I guessed the number 550,546 and the number that came up was 556,433...

2 ⌃ | ⌄ • Reply • Share ›

> **dittoheadadt** ➜ Austin M. • 16 days ago
> I guessed 441,265 and missed by just 318,000 plus or minus.
>
> ⌃ | ⌄ • Reply • Share ›

Matt • 3 years ago
Great article. Really helps put things in perspective for us visual learners. I came across a website years ago

Great article. Really helps put things in perspective for us visual learners. I came across a website years ago that was similar in theme. It had a stick figure for every dead/missing person from the 2004 Indian Ocean Tsunami. It was pretty shocking to say the least and really brought home the scale of that tragedy.

∧ | ∨ • Reply • Share ›

Ted Sheridan • 3 years ago

I use this trick to visualize how big one million is when teaching powers of ten to students: Imagine an empty plastic box, one cubic meter in volume (1m x 1m x 1m). Start filling it with small cubic centimeter blocks. You'll be able to fit 100 blocks on each side, and it takes exactly one million blocks to fill up the whole box. It allows you to visualize a million in terms of things that are easy to grasp visually. On top of that, if you can convince people to buy your small blocks for $1 each, you'd have a million dollars sitting right in front of you.

1 ∧ | ∨ • Reply • Share ›

> **Mike Taylor** ➜ Ted Sheridan • 2 years ago
>
> A 100x100x100 cube doesn't do a great job of visualising a million for me, because I think we (humans) have more difficulty grasping volume in an intuitive sense than we do when the same volume is laid out in a 2D format.
>
> For example, a 1m x 1m x 1m cube *feels* relatively small compared to the million dots drawn in the main post. It isn't, but it definitely feels that way in a visualisation sense. Something about the neat compactness of the cube, and the fact that once constructed you can't even see the majority of the cubes that make it up (so it isn't really that visual), somehow obscure the size of the number.
>
> I think the 2D representation does a lot better job of capturing the size of the number.
>
> 2 ∧ | ∨ • Reply • Share ›

Sjoerd van Driel • 3 years ago

I don't know what you are doing over there, but over here I am kicking myself for not knowing about your site before today

6 ∧ | ∨ • Reply • Share ›

R W • 3 years ago

scrolling down 1 million dots made me realize how dirty my screen is

17 ∧ | ∨ • Reply • Share ›

> **dittoheadadt** ➜ R W • 16 days ago
>
> It made me realize how many floaters I have in my eyes.
>
> ∧ | ∨ • Reply • Share ›

Xwing • 3 years ago

Did you add the new Princess of the Kingdom of South Sudan?

1 ∧ | ∨ • Reply • Share ›

12centuries • 3 years ago

Wow, 120,000 children murdered each day. One death is a tragedy. 120,000 is a statistic.

3 ∧ | ∨ • Reply • Share ›

JustMike • 4 years ago

About the "666" phone nbr. Mine ends in -0666. I'm sooo tired of the weird looks and awkward laughter that ensues.

1 ∧ | ∨ • Reply • Share ›

Jillian • 4 years ago

"Let's pause for a second to acknowledge how ridiculously impressive it is that humans got humans onto the moon and safely back." And they did it with the technology they had at the time... which is extremely different from the technology we have at this time...

8 ∧ | ∨ • Reply • Share ›

chandu • 4 years ago

can someone plz make me understand this??

2 ∧ | ∨ • Reply • Share ›

andrea • 4 years ago

Question- how can 1 in 583 people be millionaires? I must not be doing the math right. 7 billion people in world 12 million millionaires....this driving me nuts, but I do not see how the 1 in 583 is figured out. I think you pulled your source from the yahoo answers?

2 ∧ | ∨ • Reply • Share ›

> **some dude** ➜ andrea • 4 years ago
>
> So...
>
> 12 M / 7000 M = 12 / 7000 = 1/583.33~
> :D
>
> 9 ∧ | ∨ • Reply • Share ›

Bruce • 4 years ago

Order of magnitude includes 10 and 100, it doesn't go straight from 1 to 1000.

1 ∧ | ∨ • Reply • Share ›

> **DreadPirateZed** ➜ Bruce • 4 years ago
>
> I had the same reaction, but then I re-read it and noticed that he's saying it's part of the "elite chain" of order-of-magnitude numbers; he simply means that it's one of the marquee names.
>
> 1 ∧ | ∨ • Reply • Share ›

Nitya • 4 years ago

Damn it Tim! You just had to put in that red dot somewhere in the 1,000,000 _and_ tell us about it, didn't you? My eyes are sore now. >.<
But...wish you a very happy birthday! May you have a great year ahead!

1 ∧ | ∨ • Reply • Share ›

> **Enderman1323** ➜ Nitya • 3 years ago
>
> About half a page under the 200k mark, about a quarter of the way from the left to the right
>
> 3 ∧ | ∨ • Reply • Share ›

> > **Kimberly Waters** ➜ Enderman1323 • 16 days ago
> >
> > you are a god send. thank you.
> >
> > 1 ∧ | ∨ • Reply • Share ›

> > **K Blatchley** ➜ Enderman1323 • 2 years ago
> >
> > Thank you!!!! O_O my poor eyes. I tried at least twice through to find it.
> >
> > ∧ | ∨ • Reply • Share ›

FYI • 4 years ago

Your ideas of what are important numbers are because of those silly words in your native language. In Chinese they don't care about million for example - instead the important words are 10 (十), 100 (百), 1,000 (千), 10,000 (万) and 100 million (亿). Million is just 10 10,000s. Also note that in China they count to 10 on one hand with fingers and then various 2 finger combinations, so 2 hands gives you up to 100 (it's a very simple learning curve but much better than the base-6 suggested earlier.)

In India as well, they use numbers like lakh (100,000) and crore (10,000,000) but as the standard language is English (now) they also use million instead of discarding it altogether.

As usual, great and thought provoking post though!

3 ∧ | ∨ • Reply • Share ›

> **Adam** ➜ FYI • 3 years ago
>
> Just a note on the counting thing - and I'm blatantly stealing this from a Dinner Table comment (thanks, Remko Tronçon) - you can get up to 1023 (an order of magnitude above China's 100) on your hands if you know binary.
>
> Basically, your first finger is worth 1, your second worth 2, then 4, 8, 16 etc. For each finger you hold up, add those values together.
>
> So if I have all 5 fingers on my left hand held up, that 1+2+3+4+5 = 15.
> If I have my third finger on my right hand (2^(8-1) = 128), right hand thumb (32) and little finger on my left hand (16), that's 176.
> All fingers on both hands is 512+256+128+64+32+16+8+4+2+1 = 1023
>
> ∧ | ∨ • Reply • Share ›

hayley • 4 years ago

I just changed it to 100 and got 26, 24 and 24. Almost had it.

3 ∧ | ∨ • Reply • Share ›

bbroome62 • 4 years ago

Happy belated birthday Mike, Steve, uh, whatever your name is. :)
I am getting you the same thing I got you last year.

1 ∧ | ∨ • Reply • Share ›

jaime_arg • 4 years ago

If you don't reference the Rent song in your next post I will be very disappointed. And I don't even like that song.
PS: happy birthday!
PPS: your birthday in UNIX time is 374371201 (not accounting for your actual time of birth)

1 ∧ | ∨ • Reply • Share ›

a lesbian commoner • 4 years ago

So we must have 8 lesbian real-life princesses, or more!! Nice!! ;)

11 ∧ | ∨ • Reply • Share ›

Maxwell Brenton Markusen • 4 years ago

And when you think that the average human lifespan is 28,740 days... Things really start getting put in perspective..

∧ | ∨ • Reply • Share ›

GemmyB • 4 years ago

Even your silly posts are enjoyable :-) Happy belated birthday!

∧ | ∨ • Reply • Share ›

Berwyn • 4 years ago

Was this whole post about flogging a 1,000,000 poster? Don't get me wrong i enjoyed the read.......

∧ | ∨ • Reply • Share ›

Rodrigo Gomes • 4 years ago

If somebody had consulted me before stablishing the decimal system, that is what I would say:
We have ten fingers, five in each hand, and for this reason the number base should be SIX.

Here is the explanation:
Each of the two hands would be able to reproduce the six digits (0,1,2,3,4,5). With the first hand representing the units and the second hand representing the "sixens", one could do the following combinations with two hands:

00 - 01 - 02 - 03 - 04 - 05
10 - 11 - 12 - 13 - 14 - 15
20 - 21 - 22 - 23 - 24 - 25
30 - 31 - 32 - 33 - 34 - 35
40 - 41 - 42 - 43 - 44 - 45
50 - 51 - 52 - 53 - 54 - 55

It is by far the most optimized system for finger-counting, and converting to our decimal system it allows to count from 0 to 35 (again, with only the hands!).

UPDATE:
Found out that wikipedia already knew that: http://en.wikipedia.org/wik...
If they weren't able to change things, who am I to think I could... ? :-)

6 ∧ | ∨ • Reply • Share ›

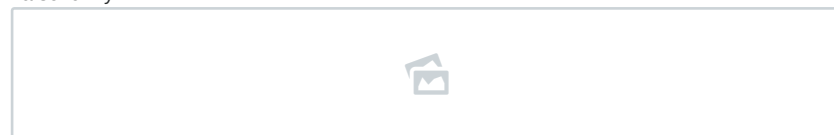> **Walker Brault** ➜ Rodrigo Gomes • 4 years ago
>
> If you think base 5 is good, you'll think binary is brilliant. Holding the finger up =1 holding it down = 0. With one hand you can count up to 31, with both you can count up to 1023.
>
> 7 ∧ | ∨ • Reply • Share ›

>> **connor** ➜ Walker Brault • 3 years ago
>>
>> ha so funny!
>>
>>
>>
>> 1 ∧ | ∨ • Reply • Share ›

>> **Rodrigo Gomes** ➜ Walker Brault • 4 years ago
>>
>> haha who would think that there are so many numbers in our hands?
>> But I stick to the base 6 system, because in my opinion it is the best balance between "efficiency" and simplicity: we still only count fingers, no need to analyse combinations.
>> Of course this perspective could change dramatically if we were taught in binary base since childhood...
>>
>> 2 ∧ | ∨ • Reply • Share ›

Nerissa • 4 years ago

Bon anniversaire Tim! Thanks for all your great posts.

∧ | ∨ • Reply • Share ›

Brunno • 4 years ago

Happy birthday Tim! Thanks for another fun post

∧ | ∨ • Reply • Share ›

marisheba • 4 years ago

Okay, just went back and read through the post more thoroughly. Slander! What do you have against 9, such a beautiful number?! While 10 (incredibly useful as it may be) is kind of an awkward number, 9, next to it, is so svelte and beautiful. It's mysterious and bold; harmonious and unconventional. Being the perfect square of 3--another lovely, spirited number--It manages to combine the surprise and quirkiness of an odd number with the orderliness and balance of an even number, but without the boring predictability of an even. (4, 8, 16--these numbers are very handy, certainly, but they're so stayed, so....EVEN through and through. I much

prefer a 12 or a 24, with all of their many factors, and some nice refreshing 3s thrown into the mix.) 9 is also a really beautiful shade of blue (synesthete here).

And then it's so mathematically cool as well! There's the magical finger method for any multiple of 9 up to 90. And there's the mind-blowing fact that the digits of any multiple of 9 will add up to 9 themselves. Amazing and mysterious. (I'm sure there's some technical explanation out there, but this is a rare case where I prefer not knowing, retaining the mystery). And thinking about it further, I do think that I think of 9 as a very feminine number, another thing I identify with about it that Tim probably does not.

Okay, done with nerdscreed. I guess it's good there's enough of us out there to give each number its due time in the sun!

8 ∧ | ∨ • Reply • Share ›

Justen ➜ marisheba • 4 years ago
I'm a big 9 lover too. I turned 9 on 9-9-1989 and 19 on 9-9-1999. But I think 9 is just on the masculine side of metrosexual.

1 ∧ | ∨ • Reply • Share ›

hi-endian ➜ Justen • 4 years ago
The Dreamcast also came out on 9-9-99 haha

∧ | ∨ • Reply • Share ›

klajs, Sweden • 4 years ago
My eyes hurt from looking for the red dot. I had to abort the mission before I found it out of fear from losing my sight forever.
(HAPPY BIRTHDAY TIM! You're the best!)

∧ | ∨ • Reply • Share ›

Paul Rybak • 4 years ago
Bristol Motor Speedway has a few thousand seats less due to reducing seats. But three years ago it had 150,000 seats and 36,000 skybox seats for 186,000.

1 ∧ | ∨ • Reply • Share ›

marisheba • 4 years ago
Yay numbers! Awesome seeing one million dots laid out side-by-side, it definitely brings out the largeness of 1 million.

Tim, in terms of other ways to visualize: I made this pdf just last week for a student I am working with on place value, visualizing numbers up to 10 million in a different kind of way from Tim's:
https://drive.google.com/fi...

The first page visualizes a set of cubes we actually work with day-to-day, and the rest visualizes what it would look like of we had loads and loads of those 1,000-cube blocks. You have to download and zoom in a bit on the last two pages, but the
hash lines showing the tiny individual cubes are there throughout the
visualization.

Incidentally, the small individual units are 1cm cubes, meaning that the big 1 million cube block is only 1 cubic meter--while the fact that 1,000,000 cubes is = to 100^3 cubes is pretty self-evident when you do the math, it still astounds me that a million of those things could so easily fit on my dining room table!

∧ | ∨ • Reply • Share ›

Tim Urban `WBW` ➜ marisheba • 4 years ago
Love it. I was so sad when it ended at 10 million.

∧ | ∨ • Reply • Share ›

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3 Comments

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Michal Nemecek
so... has anyone found the red dot yet?
Like · Reply · 👍 1 · 1y

> **Dana Smith**
> It was on George Costanza's coat.
> Like · Reply · 17w

> **Alec Tran**
> Kind of below 200,000 to the left
> Like · Reply · 15w

William Montgomery
For anyone struggling with the dots here's another way to get an idea of a million: If you counted non-stop (1 count per second) it would take you 11.574 DAYS to count to 1 million!!
Like · Reply · 38w

Dana Smith
This video depicts the staggering number of abortions in America alone in a much more striking way:
https://vimeo.com/200559134
Like · Reply · 17w

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