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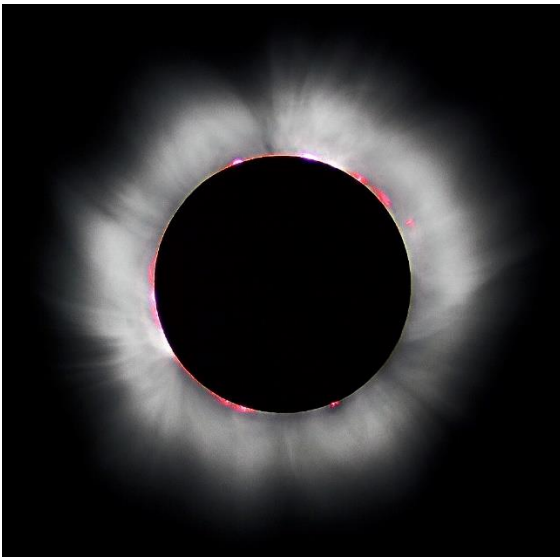
Mathematical Proof that the
World was Created by G-d.

Zivi Ritchie, BsEE

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Mathematical Proof that the World was Created by G-d.

The first book of the series:

Secrets of the Torah

Zivi Ritchie, BsEE

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Mathematical Proof that the World was Created by G-d

Table of Contents:

1. The diameter of the sun is 400 times bigger than the diameter of the moon.
2. The sun is 400 times further away from earth than the moon is.
3. The sun is 400,000 times brighter than the full moon.
4. Earthshine on the moon is 40 times brighter than moonshine on the earth.
5. The sun's corona is 800,000 times dimmer than the sun, and half the brightness of the moon.
6. The sun rotates at different speeds at its poles and at its equator, but the average time of the sun's rotation is the same time as the moon's orbit around the earth.
7. The moon is 30 earth diameters distant from the earth.
8. The earth orbits around the sun at $1 / 10,000$ the speed of light.
9. The moon orbits around the earth at $1 / 300,000$ the speed of light.
10. It would take 1000 seconds for light to travel the diameter of the orbit of the earth together with its moon in opposition to the sun.
11. The total land mass area of earth (without the oceans) in square meters is the same number as the distance from the earth to the sun in meters.
12. Light travels the distance from earth's equator to the north pole 30 times in one second.
13. The sun rotational velocity at the equator is $1 / 150,000$ the speed of light.
14. The sun's rotational velocity at its equator is twice the orbital velocity of the moon around the earth.
15. The earth travels around the sun at 15 times the speed that the sun rotates at its equator.
16. The moon orbits the earth at about 30 times earth's rotation.

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Mathematical proof that the world was created by G-d

This is an earthshaking revolutionary book that changes what people understand, about the world. especially people who trust in science who do not know about this new groundbreaking proof of intelligent design of the world!

This book has mathematical proof that the world was created by G-d. Through exact metrics we can see that the universe was created by intelligent design. The chances of all of the following 16 measurements which are also correlated to happen together by chance is statistically impossible.

These are the correlations that I realized when researching the dimensions, velocity, and brightness on the Wikipedia pages of the sun, moon, and earth.

Mathematical Proof that the World was Created by G-d

1. The diameter of the sun is 400 times bigger than the diameter of the moon.
2. The sun is 400 times further away from earth than the moon is. These first two measurements enable a perfect total eclipse, which has been determined to not exist anywhere else in the solar system.
3. The sun is 400,000 times brighter than the full moon.
4. Earthshine on the moon is 40 times brighter than moonshine on the earth.
5. The sun's corona is 800,000 times dimmer than the sun, and half the brightness of the moon. These first five sun-moon-earth correlations are all multiples of 40.
6. The sun rotates at different speeds at its poles and at its equator, but the average time of the sun's rotation is the same time as the moon's orbit around the earth.
7. The moon is 30 earth diameters distant from the earth.
8. The earth orbits around the sun at $1 / 10,000$ the speed of light.
9. The moon orbits around the earth at $1 / 300,000$ the speed of light.
10. It would take 1000 seconds for light to travel the diameter of the orbit of the earth together with its moon in opposition to the sun.
11. The total land mass area of earth (without the oceans) in square meters is the same number as the distance from the earth to the sun in meters. And that number is 500

Eclipse!

times the number of the speed of light in meters per second.

12. Light travels the distance from earth's equator to the north pole 30 times in one second. A *chelek* is 3.33333 seconds. It is a measurement of time used for thousands of years by the Jewish People to accurately calculate the lunar month. The speed of light can therefore be written as 1 billion [meters/Chelek] and therefore can also be written as; Speed of light = 100 [distance equator to pole / chelek].
13. The sun rotational velocity at the equator is 1 / 150,000 the speed of light.
14. The sun's rotational velocity at its equator is twice the orbital velocity of the moon around the earth.
15. The earth travels around the sun at 15 times the speed that the sun rotates at its equator.
16. The moon orbits the earth at about 30 times earth's rotation.

Probability of being random

= 1 / 9,700,000,000,000,000,000,000,000,000

How precise are these correlations of numbers?
Very, very precise! All of the correlations of orbit fall within the small variations of orbit size and all the correlations of brightness fall within the small fluctuations in brightness. All the correlations of

non-fluctuating numbers are very close. Most of them are within about one percent of each other.

We show in this book the mathematical proof that the probability of all these 16 things happening together randomly is one in 9.7 million x trillion x trillion.

Since we live in an organic analog world, there is no such thing as being exactly the same number, so we do statistics and probability by measuring how relatively close it is to the exact measurement and using that fraction to compute probability.

In calculating the probability of a few things happening together, the probabilities are multiplied by each other. So when the probability of each individual thing happening on its own is one in a thousand, then the probability of two of those things happening together is one in a million. And so on; the probability of three of those things happening together is one in a billion, and the probability of four of those things happening together is one in a trillion. So we see here that we have 16 different things happening together, that would be one in a trillion, trillion, trillion, trillion chance to happen.

This means that it is impossible for all of these things to happen by chance.

Eclipse!

These are the probabilities of all these events happening. We multiply them together to get the total probability. The details of the calculations of each event happening on its own are shown later on in the book.

The probability of all of these events happening together is the multiplication of all the individual probabilities: Probability1 is $1/250$ x Probability2 is $1/80$ x Probability3 is $1/105$ x Probability4 is $1/6.67$ x Probability6 is $1/2250$ x Probability7 is $1/119$ x Probability8 is $1/227.3$ x Probability9 is $1/29$ x Probability10 is $1 / 5,688.7$ x Probability11 is $1 / 151.5$ x Probability12 is $1/963$ x Probability13 is $1 / 823.6$ x Probability14 is $1/42.5$ x Probability15 is $1/116$ x Probability16 is $1/42.5 = \text{Total}$

Total = $1 / 3,500,000,000,000,000,000,000,000,000$

Now we must divide this by the number of all the possible ways to make correlations:

There are 3 objects:

The sun, moon and earth.

There are 11 ways to correlate between the 3 objects:

Orbit radius, diameter of object, circumference of object, surface land area of object, orbital velocity of object, angular velocity at equator, average rotation time period of object, equatorial rotation

Mathematical Proof that the World was Created by G-d

time period of object, brightness of object,
brightness of corona, and speed of light.

So there are $11 \times 11 = 121$ possible ways to correlate
two objects.

And there are $3 \times 121 = 363$ possible ways to
correlate all of the 3 objects.

Now we must divide the total probability by all the
possible ways to correlate:

$$(1 / 3,500,000,000,000,000,000,000,000,000,000) / 363 =$$

Probability of being random

$$= 1 / 9,700,000,000,000,000,000,000,000,000,000$$

So the exact probability of all these things
happening randomly is one chance in 9.7 million x
trillion x trillion.

And this is the probability of all these things
happening randomly by chance!!! It is statistically
impossible for it to be by chance. This proves
scientifically, and mathematically, that the world
was created by the all-powerful and all-intelligent
Creator of the world.

All of these things, the earth, sun, moon, and speed
of light, are related to each other by significant

Eclipse!

importance because only on this earth is the place where the Torah was given to people.

These correlations are not found anywhere else in the universe. All of the other planets, moons, and asteroids do not have any of these correlations of distance, size, speed, and brightness that we find with the earth, moon, and sun. Either the other planets' moons are not round enough, not in the right orbit, or too far away from the sun, or too close to create a perfect eclipse, or to have any of these other correlations.

This is scientific mathematical proof that the universe was not a random event. The world was clearly created using intelligent design by an all-powerful being. The Torah teaches us about the Creator of the world.

The Jewish People received the Torah from G-d on Mount Sinai. Since then, they have, continuously studied it, and passed it down from generation to generation. Now, more than ever before, it is the time for everyone in the world to learn the written Torah and the oral Torah from the Jewish People.

The Earth is Special Because of the Torah

These very precise and unexpected correlations are found only between the earth, sun, and moon and not found anywhere else in the universe. This is because our earth has paramount importance

since G-d gave us the Torah on this planet and it was not given anywhere else in the universe.

G-d created the Torah, His blueprint of the world and then “looked into the Torah”, and used the Torah to create the world. This is why there are precise numbers that correlate *gematrias* (understanding each letter’s numerical value and evaluating it to other concepts, words, phrases and their numerical value) that reveal new concepts and understanding of the Torah. This physical world is an expression of the higher spiritual worlds and therefore has spiritual meaning. These exact numbers are found in the metrics of the earth, sun, and moon as stated above. This is because the earth, sun, and moon are created as expressions of spiritual things. Such as the *Zer Anpin* (Male aspect), and *Nukva* (Female aspect), and the earth is called “the center of the universe” because of its importance as hosting people who received the Torah and observe the commandments of G-d.

(תהלים יט)

השמים מספרים כבוד אל ומעשה ידיו מגיד הרקיע

It says in the Psalms (19): “The skies speak of the honor of G-d, and the far heights above tell that all is the creation of G-d’s hands.” This means that by looking at the skies and seeing the impossibility of these numbers and correlations happening randomly, it tells us that G-d created the world.

Eclipse!

הרבי מלובביץ אומר - בימות המשיח נבין את מה שאיננו מבינים כיום: "דברים שלוקחים עכשיו בדרך של אמונה, לעתיד לבוא יומשכו בהשגה, ואילו האמונה שבימות המשיח תהיה בעניינים נעלים הרבה יותר, שבזמן הזה אין יודעים אודותם כלל, אפילו בבחינת אמונה" (תורת מנחם, כרך לו, עמ' 11).

We are now beginning to taste the times of the imminent complete redemption, so we are now able to begin to understand logically that G-d created the world, with the help of the mathematical proof in this book.

The Lubavitcher Rebbe said (Torat Menachem vol 36 page 11) "In the days of the Messiah we will understand what we do not understand today: 'Things that we believe in now only by way of faith because we can't understand them, in the future will be clearly understood by way of logical understanding. While the things that we will understand by way of faith in the days of the Messiah will be in much higher matters, about which at this time we do not know of at all, even in terms of faith'".

A Gematria Explanation

The twelfth letter of the Hebrew alphabet is **ל** (*Lamed*), with a numerical value of 30. This corresponds to the size of earth's diameter relative to the distance from the earth to the moon.

Mathematical Proof that the World was Created by G-d

The first letter of the Hebrew alphabet is **א** (*Alef*), which has a numerical value of 1, but also means *Elf*, 1,000. This corresponds to the speed of light relative to the distance of the diameter of the orbit of earth and moon around the sun.

The thirteenth letter of the Hebrew alphabet is **מ** (*Mem*), with a numerical value of 40. This corresponds to the relative brightness of earth and the moon.

The numerical value of the last letter of the Hebrew alphabet; **ת** (*Taf*), is 400. This correlates to the moon's and sun's relative sizes and distances.

Together these four letters spell **אמת** (*LeAMeT*), which spells out "To prove the truth." as these correlations prove the truth that the world was created by G-d.

Leamet, meaning "to prove the truth" even though it is a grammatically correct Hebrew word, is not used in ancient Torah text, and only recently "***Leamet***" has become a commonly used Hebrew word. The word was not used, since it was not needed. No one needed proof of the truth since they were there! The entire nation of the Jewish People that came out of Egypt, did not need to prove the truth, as they were present on Mount Sinai, and saw with their own eyes and heard with their own ears. The entire nation then told their children and grandchildren, and they told their children and grandchildren what they and the whole

Eclipse!

nation saw themselves. Only recently has there been some dispute, and so we need to, "**Leamet**", to prove the truth. And only recently have all of these metrics been precisely measured so that we can now prove the truth, "**Leamet**".

The Significance of the Number 40 in the Torah

The number 40 is repeated quite often in Torah, not only in the correlations mentioned above, but in many details given by the Torah. There were 40 days and 40 nights of rain during the Flood of Noah. Moses went up Sinai for 40 days. Moshe sent the spies out for 40 days. Jonah, the prophet, predicted that Nineve would be overturned in 40 days. The Jews wandered in the desert 40 years. Goliath taunted Israel before David confronted him for 40 days. And more...

1. The diameter of the sun is 400 times bigger than the diameter of the moon.

And here we can find more significance in the numbers. The sun is 400 times larger in diameter than the moon. There may be some small discrepancies from rounding numbers in the calculations, but they are so small that they do not affect the final outcome by anything substantial.

Mathematical Proof that the World was Created by G-d

The sun is 1,392,700 km in diameter.

The moon is 3,474.8 km in diameter.

1,392,700 divided by 3,474.8 equals 400.800

The sun is 400.8 times larger than the moon

$$(400.800 / 400) - 1 = 0.00200 = 1 / 500$$

These two measurements of the sun and the moon are correlated to a significant number, 400, to within with a fraction of $= 1 / 500$

The Fraction is, how far the number is from a significant number: significant number / number

$$\text{Fraction} = (400.800 / 400) - 1 = 0.00200 = 1 / 500$$

To calculate the probability:

Range is the distance to next significant numbers.

For example, the significant number "400" would have 300 and 500 as its closest significant numbers. The significance of this number 400 is explained in this book by its spiritual correlation.

The Numbers are also considered significant when they are a whole multiplication such as 10, 20, 30, 40, 50. Or 100, 200, 300, 400, 500. Or 1000, 2000, 3000, 4000, 5000, and so on.

The Numbers are also considered significant when they are a whole multiplication such as 10, 20, 30, 40, 50. Or 100, 200, 300, 400, 500. Or 1000, 2000, 3000, 4000, 5000, and so on.

$$\text{Range} = 500 - 300 = 200$$

Eclipse!

Resolution shows how close the number is to the significant number:

Resolution = (number) - (significant number)

Resolution = 400.8 - 400 = 0.8

To calculate probability, we count how many times the resolution fits inside of the range:

How many times the resolution fits inside =
Range/Resolution

$200/0.8=250$

Probability of this number being so close to the significant number by chance = $1/250$

This is just the probability of this one event alone. We now need to take into consideration the probability of all of these 16 events happening together.

2. The sun is 400 times further away from earth than the moon is. These first two measurements enable a perfect total eclipse.

The moon's orbit is not completely round; it is slightly elliptical. The moon can therefore be anywhere between 362,600 km away and 405,400

Mathematical Proof that the World was Created by G-d

km away from the earth. Whenever it is about 400,800 km away during an eclipse, then we can see a perfect total eclipse and the sun's corona will be visible.

Let's now find the average distance from the moon to the earth: $(362600 + 405400) / 2 = 384,000$ km.

384,000 km is the moon's average orbit radius.

Distance from earth to sun 149,600,000 km

$149,600,000 / 384,000 = 389.5$

$(400.8 / 389.5) - 1 = 0.02901 = 1/34.46$

The average orbit is the same ratio as the ratio between the size of the sun and the size of the moon within a fraction of 3%. This 3% actually helps by making the eclipse visible on larger swaths of the earth more often.

The range here is not relative to a significant whole number, but rather it is to the possible size of an orbit of a moon around a planet, and we then calculate the likelihood of perfect eclipse.

Range is $1000 - 100 = 900$

Resolution $400.8 - 389.5 = 11.3$

$900 / 11.3 = 80$

Eclipse!

Probability = $1/80$

This at first seems that this fraction of $1/34$ which doesn't seem to be very close to zero and therefore not impressive for our findings. But there is a good reason that the distance from the earth to the moon is slightly less than an exact ratio of the size of the sun relative to the size of the earth. And this is so that the shadow of a complete total eclipse will be seen over a larger swath of the earth!

The distance from the sun to the earth is 400 times greater than the distance from the earth to the moon. This proportion makes it possible for a full total eclipse. Our moon is just the right distance, angle, and size to make it happen. The exactness is beautifully understood especially when compared to other planets' moons. All the moons in our solar system which was over 100 moons and large asteroids (some moons have their own moons), **not one**, not any other moon creates a full eclipse, because the ratio of their diameter to the relative distance between the sun, the planet and the moon are not perfectly aligned to allow for a full eclipse. None of their proportions work. They are either too far, wrong angle, the wrong size, or something else to make them not capable of making a total eclipse. None of them even come close to our moon's proportions which make it possible to have total eclipses. When calculated it would be much less

than 1 in 2000 chance for a moon to be capable of making a perfect eclipse where the moon exactly covers the sun, not too little and not too much. This perfect 1 to 1 apparent size enables us to see the corona of the sun during a total eclipse. The brightness of the sun's corona is 1/800,000 of the brightness of the sun, that is also half the brightness of the full moon.

All these points, prove that nothing in our solar system is by chance. According to kabbalah Esau, the twin brother of Jacob counts the year by the cycle of the sun. Esau just divides the solar cycle by 12 to get the months. He disregards the lunar cycle completely, as his months do not correlate with the lunar cycle. And Jacob counts the months by the cycle of the moon. The Torah commentators say that Esau came with 400 men to fight Yaakov (Genesis 32, 7), and that corresponds to the sun being 400 times larger than the moon. And the Torah commentators have an opinion that Esau came with 400 generals and each general had many soldiers.

3. The Sun is 400,000 Times Brighter Than the Full Moon

The word "general" in Hebrew is *Aluf*, which is the same in Hebrew as *Elef*, which means one thousand. So this corresponds to the sun being 400,000 - four hundred thousand times brighter than the moon.

Eclipse!

The ratio of brightness of the sun versus the moon amounts to a difference of 398,110 to 1.

$$(400,000 / 398,110) - 1 = 0.0047474 = 1 / 210$$

$$\text{Range} = 500000 - 300000 = 200000$$

$$\text{Resolution} = 400,000 - 398,110 = 1,890$$

$$200,000 / 1,890 = 105.8$$

Probability is 1/105

This is within one percent of being 400,000. So we see the number again coming up. 40, 400, and 400,000.

In a Midrash - the oral law that is written down that are deep, metaphorical stories which interprets and elaborates scriptural text - it is brought down that the moon and the sun were originally the same size, but after the moon "complained", then it was made to be a much smaller celestial being. This is also better to be explained that it did not shrink in size, but since the sun is exactly 400 times larger than the moon and it is also exactly 400 times further away from the earth than the moon is from the earth, so they both look exactly the same diameter. What happened is the moon became less bright.

Rabbi Issack of Humil brings this in his book *Shnei Hameorot - The Two Luminaries*: Originally the moon was made out of pure glass or sapphire

without any gray dust. It would shine the sun's light unto the earth without absorbing any of the sun's light for itself, so then we would see the moon shining, the sun's light was going through the moon and not just reflecting only 11% of the light off of it as it does today. So this huge sapphire stone would shine through and the light would emerge on all sides, so the moon would appear full all the time. And the light would be more direct by refraction and not just reflected.

So on a kabalistic view of this, the moon is the Kingdom [*Malchut*], and the sun is the face of the Sefirot above the Malchut - the Zer Anpin (the male aspect). The *Malchut* does not have its own light, it just has the light that comes to it from the *Sefirot* above it. If the *Malchut* is a perfectly clear vessel, then it does not waste any of the light. This corresponds to the moon changing from being a clear ball of glass to a ball covered in darkish gray dust.

But here is another interesting point. If the moon was transparent sapphire, then it would shine so bright that we would not be able to see or notice the corona (crown) during a total eclipse. Corona, in English, means crown and in Hebrew it is *Keter*. And this is the meaning of the Medrash (Torah commentary teaching) that says that the moon said to G-d, "How can two kings share the same crown?" And G-d said to the moon, "You make yourself smaller."

Eclipse!

This is based on the verses in the Torah: (Genesis 1, 16)

And God made two big lights; the big light to rule the day, and the small light to rule the night. It first said "Two big lights", and then right after that it says; "the big light"... And "the small light". So we learn from that, at first the two lights were big, and then one became smaller.

Rabbi Issack of Humil brings this in his book *Shnei Hameorot - The Two Luminaries*: The moon was not jealous of the sun's crown, on the contrary, the moon loved the sun and wanted to get closer and unified with it and share the same crown together.

Thus the moon asked G-d how can this be done? and G-d said, "Make yourself smaller." This was not G-d punishing the moon, but it was just G-d telling the moon how it can be done: By the moon making itself smaller, by covering itself with dust, it was no longer transparent.

So the way I understood this is: During a total eclipse, the moon and the sun are seen both together sharing the same crown. They are literally sharing the same crown, because you see the corona around both of them at together during a perfect eclipse. And this would not be possible to see or even notice if the moon was transparent and allowing the sun's light to shine through it during an eclipse. Because otherwise it would drown out the

much fainter light of the corona. The sharing of the same crown is what the moon *wanted* because it is a “romantic” relationship between the sun and the moon. According to the kabbalah, this event is the unification of the sun and the moon, which is also the unification of the spiritual male aspect with the spiritual female aspect.

The Sun and Moon and the Number 40

4. Earthshine on the Moon is 40 Times Brighter than the Moonshine on the Earth.

The Rambam (Maimonides) says the moon is 1/40th the size of the earth. Many scholars have tried to figure out what they mean by that amount. They have tried various ways of measuring the earth, the sun, and the moon but they didn't understand what the Rambam was referring to.

The Rambam writes

**(הלכות יסודי התורה ג ח): והארץ גדולה מן הירח כמו
ארבעים פעמים,**

“And the Earth is bigger than the Moon by about forty fold.”

Eclipse!

Understanding what Maimonides meant

The diameter of the moon is 3,474.8 kilometers. The diameter of the earth is 12,742 kilometers. So the moon's diameter is 27.27% of the earth's diameter.

The disk area ($A=\pi r^2$) of the moon as we see it is 9,483,082.025 square kilometers, and the disk area of the earth is 127,516,117.977 square kilometers. So the earth is 13.4 times bigger than the moon if you are calculating the viewed surface area.

Since the moon is 27% of the diameter of the Earth's diameter, it would make the moon about a quarter of the Earth if you measure its diameter. This didn't seem to work with the Rambam's figuring. The surface area of the moon would be about 7.47% of the Earth. The volume of the earth is 49.4 times that of the volume of the moon. The mass of the earth is 81 times more than the moon. And gravity on the moon is $1/6^{\text{th}}$ of the earth's pull. None of those accountings help to understand what the Rambam and Baal HaTanya meant.

I met a Rabbi in Uruguay, who is writing a book about these similar discussions. He is considering measuring the volume as a way to understand the Rambam, but it doesn't quite work as well as he would like. One of the problems with that direction is that the volume of the earth is about 50 times more than the moon and not 40 times. The other

problem is by measuring the volume for the relation between the earth and the moon, it would be also necessary to use the same metric to compare the earth and the sun, but the sun has a volume that is a whopping 1.3 million times more than the volume of the earth.

I tried to help him solve this problem. I figured that the moon's area is about 15% of the earth. The moon is made of darkish gray matter, which is not very reflective. There isn't any white cloud covering like the earth has. This makes the moon less reflective than the earth. The reflectiveness of the earth varies depending on cloud cover and ice cover. It also varies depending on the rotation of the earth because the oceans reflect less light. But the average reflectiveness of the earth is about 3 times more reflective than the reflectiveness of the moon.

Since the earth is more reflective than the moon and is also larger. It comes out that the earth's total brilliance averages 40 times brighter than the moon. So it seems that it is the earth's brightness is what the Rambam was discussing.

It is noted that the reflectiveness of the earth is 3 times more reflective than the moon. Working out the calculation of what the earth's reflection compared to the moon, it would be 40 times brighter than the moon. The brightness varies from about 35:1 to 50:1 and the average difference in brightness has been calculated to be about 43:1.

Eclipse!

$$(43 / 40) - 1 = 0.075 - 1 / 13.33$$

$$\text{Range} = 50-30=20$$

$$\text{Resolution} = 43-40 = 3$$

$$20/3= 6.67$$

Probability is $1/6.67$

How could the Rambam know this? 1000 years ago he had not been able to visit the moon to see it in person. We'll have to use the same tools that the Rambam would have had, which would most likely be the naked eye.

Here is the explanation; when we look at the new moon, we see a sliver of light of the moon with a faint view of the rest of the moon. How is that possible? The sun is shining on that sliver, but it isn't lightening the rest of the moon. At that time of the month, the sun only shines on that sliver. The sun doesn't have any way to shine off the moon other than the sliver we see. So how do we see the rest of the outline? Do we imagine the circle? Perhaps our brains fill in and complete the circle. But no it isn't us. The little bit of faint illumination that shows us the outline faintly is a reflection of the sun bouncing off of the earth. This

illuminates the rest of the moon just enough for us to see it faintly.

That is what the Rambam saw a thousand years ago, the brightness of the moon. He was able to know the relative brightness of the earth and the moon by calculating the relative brightness of the earthshine on the moon. He worked out the Earth is 40 times brighter than the Moon. The Rambam was speaking about the difference in brightness, and that is what he meant when he said that it is 40 times bigger.

After looking it up in quite a few places, this seems to be an original thesis of understanding of the Rambam's calculation of the relative size of the Earth to the moon.

This started me on my journey to discover more correlations between the metrics of the sun, moon, earth, and even the speed of light. I checked the metrics of the brightness and size of the sun and the moon, and then discovered another correlation, and then another, and then another. The more I checked and double checked the dimensions, size, speed, the more I noticed more correlations, until I put together this book proving mathematically that the world was created by intelligent design, because there is a next to zero chance that so many of these exact correlations could just happen by chance.

The Size of the Sun Relative to the Size of the Earth

The Rambam [Maimonides] said that the sun is approximately 170 times larger than the earth. The *Bal HaTanya* quoted this from the Rambam in the *Tanya*. The **Lubavitcher Rebbe** tried to work it out. Because in actuality the sun is 110 times larger in diameter than the Earth. The Rambam had said the difference was 170 times larger. How does it work?

The **Lubavitcher** Rebbe said quite correctly, that we have to count the halo that is around the sun. But if we are just measuring the thin atmosphere of the sun, it is less than 1% as an addition. That is not where we can figure another 50% or so difference. What he is talking about is the corona of the sun. The corona as measured by scientific instruments can extend across the sun another 500% to 800%, which is much more than an additional 50%. So this does not work with what the Rambam was talking about.

Let's look at this simply; when we look at a solar eclipse, we can see the corona while the sun is completely covered. The amount we can see with the naked eye is about an additional 50% more of the size. All figures are approximate since what we can see depends on our atmosphere, weather, and the angle where we are viewing. But generally, we can see about 50% more of the corona's space around the sun.

So this figure works nicely with what the Rambam could see in their days 1000 years ago. They were looking at eclipses and trying to figure out the real size of the sun. When there was an eclipse they figured that the sun including its visible corona came out to be 170 times bigger than the earth in diameter.

Both were correct. Exactly right! They were able to measure the corona during an eclipse and determine that the sun was 170 times bigger than the earth and the earth was 40 times bigger than the moon by measuring the brightness of the moon and the earth.

Any modern-day scoffers of the Rambam and the Baal Tanya who thought the Rambam and the Baal HaTanya were wrong were the ones who were wrong because it really worked out to match with our science known today. The Rambam and the Baal Tanya got it right. They knew the correct measurements. They were measuring the brightness of these bodies to what we can see and they were spot on.

Now some people might ask, but we are not using the same metrics to measure the difference in size of the earth compared to the moon, and the sun compared to the earth. One metric is measuring relative brightness and the other metric is using diameter including the visible corona. To understand this, you need to stop thinking the way we are used to in the year 2024, and think the way they spoke one thousand or two thousand years

Eclipse!

ago. They needed to explain things in a way that would be understood, remembered, and written down concisely to last for thousands of years. They needed to explain and demonstrate it in a way that people could see with their physical eyes, or else they would not believe it or understand it at all.

So what they did was show people the sliver of the new moon, and say: "Do you see the bright sliver of light, yes? Do you also see the rest of the moon very faintly? How do you see the rest of the moon if the sun is only shining on the bright sliver? So you see; this is because the rest of the moon is faintly illuminated by the shine of the earth. Isn't that neat? So you can see with your own eyes proof that the earth reflects sunlight, and also, we can calculate how bright the earth's reflection is compared to how bright the moons reflections is by comparing how bright you see the light from the full moon compared to the how bright you see the earth's light reflected off of the moon. This calculates out to be that the earth is about 40 times bigger (meaning **brighter**) than the moon."

And then they would continue and say: "And another cool fact: Look at the sun during a total eclipse. You will see that the sun has a corona around it. So this proves that the sun is bigger than you thought. You just looked at the sun during the day, but you can see that it is really about 50% bigger if you look at it during a total eclipse. Isn't that neat? So the previous calculation that we made of the sun being 110 times bigger than the earth is not really precise, it is really about 165

times bigger than the earth. Let's round it up and say it's about 170 times bigger since it fluctuates and is hard to see precisely.”

So they were describing simple things that people could see with their bare eyes, and understand in a simple way. And they wrote it down in a very short concise way.

5. The Sun's Corona is 800,000 Times Dimmer than the Sun, and Half of the Brightness of the Moon. These first five sun-moon-earth correlations are all multiples of 40.

The Corona [crown] that we see during a full eclipse is the crown around the sun and the moon together at the same time. They are literally sharing the same crown. The brightness of the sun's corona is 1/800,000 of the brightness of the sun, that is also half the brightness of the full moon. (The probability of this has not been included in this book.) Since the moon is not transparent nor shining brightly, it is blocking out the sun's blinding light, which allows us to be able to look at the sun. The corona is a much fainter light. This according to the kabbalah, is the unification of the moon and the sun - of the male and female aspects.

Rabbi Moshe Genuth expounded on this idea further, explaining how a husband and wife both are willing to give up some of their own personal

Eclipse!

shine in order to get closer together to each other in unification and share the same crown together. His complete talk is available on YouTube.

6. The Sun Rotates at Different Speeds at its Poles and at its Equator, but the Average Time of the Sun's Rotation is the Same Time as the Moon's orbit Around the Earth.

The rotation of the sun, in a frame of reference defined by the stars, the rotational period is approximately 25.6 days at the equator and 33.5 days at the poles.

$$25.6+33.5/2=29.55$$

The lunar month is the same length, at 29.53 Earth days. Orbital period (synodic) 29.530589 d

$$29.55/29.530589=1.00065731842$$

This is close within 1 / 1521

The average rotation time of the sun and the lunar orbit are the same! To within less than 1/1000

$$(29.55/29.53) - 1 = 0.00065731842 = 1 / 1521$$

$$\text{Range} = 60-15=45$$

Mathematical Proof that the World was Created by G-d

$$\text{Resolution} = 29.55 - 29.53 = 0.02$$

$$45 / 0.02 = 2250$$

$$\text{Probability} = 1 / 2250$$

7. The Moon is 30 Earth Diameters Distant from the Earth.

Earth radius 12,742 kilometer

Moon orbit 384,400 kilometer

$$384400 / 12742 = 30.1679485167$$

$$30.1679485167 / 30 = 1.005598$$

The moon is 30 earth diameters away.

Accurate to within about 1 / 179

$$(30.1679485167 / 30) - 1 = 0.005598 = 1 / 179$$

$$\text{Range } 40 - 20 = 20$$

$$\text{Resolution} = 30.1679485167 - 30 = 0.16794$$

$$20 / 0.16794 = 119$$

Probability is 1/119

Eclipse!

8. The Earth Orbits Around the Sun at 1 / 10,000 the Speed of Light.

Earth's orbital speed = 29,782.7 m/s

Speed of light = 299,792,458 m/s

$299,792,458 / 29,782.7 = 10,065.99$

$(10,065.99/10,000) - 1 = 0.006599$

That means that the speed of light is about exactly 10,000 times faster than the speed of the earth traveling in its orbit around the sun.

This is to an accuracy of 1 / 151.5

$(299792458 / 29782.7) = 10065.99 \Rightarrow 1 / 151$

$(10,065.99/10,000) - 1 = 0.006599$

Range 20,000-5,000=15,000

Resolution $10,065.99 - 10,000 = 65.99$

$15,000/65.99=227.3$

Probability is $1/227.3$

9. The Moon Orbits Around the Earth at 1 / 300,000 the Speed of Light.

Moon orbital velocity 1022 m/s

$$299792458 / 1022 = 293339$$

$$300000 / 293339 = 0.0227 = 1 / 44$$

The moon orbits the earth at a rate of 1 / 300,000 the speed of light

Within error of 1/44

$$300,000 / 293,339 = 0.0227 = 1 / 44$$

$$\text{Range} = 400,000 - 200,000 = 200,000$$

$$\text{Resolution} = 300,000 - 293,339 = 6,661$$

$$200,000 / 6,661 = 30$$

$$\text{Probability} = 1/30$$

10. It Would Take 1000 Seconds for Light to Travel the Diameter of the Orbit around the sun, of The Earth with Its Moon in Opposition to the Sun.

Eclipse!

Earth average radius of orbit around the sun is:

$$(152,097,597 + 147,098,450) / 2 = 149,598,023.5 \text{ km}$$

Therefore, the average diameter of earth orbit
299,196,047 km

The average distance from sun to moon at full
moon is $149,598,023.5 + 384,400 = 149,982,423.5$

This is just about exactly 150,000,000. How close is
it? Let's see:

$$(150,000,000 / 149,982,423.5) - 1 = 0.0001171904 = 1/8533.$$

The two numbers are almost the same, they are
close to within a fraction of one in eight thousand
five hundred and thirty-three!! That is very close.
But why is this important? What does this tell us?

That is 15,000 times the distance from the earth's
equator to the earth's north pole. There were 15
steps going up to the Beis Hamikdash [Tabernacle].
There are 15 *Psalms of Shir Hamalos*, meaning; song of
steps, corresponding to that. This means that the
earth from the equator to the pole is like a step.
There are 15 steps going up to the Beis
Hamikdash, bringing the moon, the aspect of
Nukva up to the sun, the aspect of *Zer Anpin*. This
means that the world is a place that we keep the
Torah, and make spiritual unifications in the

heavens. We unite heaven and earth. We unite the world. We bring people closer to G-d.

The average outer diameter of the orbits of moon and earth combined is: $149,982,423.5 \times 2 = 299,964,847$ km.

The speed of light is 299,792,458 m/s. These numbers are very similar. Let's see how close they are:

Outer diameter earth and moon combined orbits $299,964,847$ km / speed of light $299,792,458$ m/s = $1,000.575$

That means it would take light to travel that distance $1,000.575$ seconds. With an accuracy of $1 / 1739$, which is about one in two thousandths to be exactly 1000 seconds!!

Speed of light $299,792,458$ m/s

Speed of light: $299,792,458$ / diameter of earth's orbit $299,196,047$ km = 1.00199337861

This is close within $1 / 501.66$

Light takes 1000 seconds to travel across the diameter of earth's orbit around the sun.

Light takes 500 seconds to travel from the sun to the earth.

Eclipse!

Does this mean that there is a connection between the speed of light and the diameter of earth's orbit? There is no scientific physical reason that would explain why they are correlated. But there is a spiritual reason. G-d designed this world, and made it this way on purpose. There are spiritual meanings to numbers, and they are explained in kabbala using gematrias of numbers, and these numbers are part of the architecture of the world.

The speed of light is just slightly less than 300,000,000 m/s. This hints to the fact that mass can accelerate to close to the speed of light, but cannot accelerate to the speed of light. It is similar to the physical striving and coming closer to becoming spiritual. It is not yet possible in this physical world to be completely free of physical mass. Yet we still strive and grow spiritually.

Our orbit is related to the speed of light. This means that even if we did not notice this before, the entire world is on the path of spirituality.

$$(150,000,000 / 149,982,423.5) - 1 = 0.0001171904 \\ = 1/8533$$

$$\text{Range} = 200,000,000 - 100,000,000 = 100,000,000$$

$$\text{Resolution} = 150,000,000 - 149,982,423.5 = \\ 17,576.5$$

$$100,000,000 / 17,576.5 = 5,689$$

$$\text{Probability} = 1 / 5,689$$

11. The Total Land Mass Area of Earth (without the Oceans) in Square Meters is the Same Number as the Distance from the Earth to the Sun in Meters. And that number is also 500 times the number of the speed of light in meters per second.

Earths land surface area = 148,940,000 square kilometers

The radius of earth's orbit is = 149,598,023.5 kilometers

$$(149,598,023.5 / 148,940,000) - 1 = 0.0044 = 1 / 226$$

So earth's land area and the distance from the earth to the sun correlates to within about one in two hundred

The earths land area (not including water area) is in 148,940,000 square kilometers. The distance to the sun is 149,598,023.5 kilometers. They are the same number in number value, even though one is a measurement of area and the other is in a measurement of length.

$$(149,598,023.5 / 148,940,000) - 1 = 0.0044 = 1 / 226$$

$$\text{Range} = 200,000,000 - 100,000,000 = 100,000,000$$

Eclipse!

Resolution = 149,598,023.5 - 148,940,000 =

100,000,000/658,023.5=151.97

Probability = 1 / 152

12. Light travels the distance from earth's equator to the north pole 30 times in one second.

A **chelek** is 3.33333 seconds. It is 1/18 of a minute. It is a measurement of time used for thousands of years by the Jewish People to accurately calculate the lunar month. The speed of light can therefore be written as 1 billion [meters/Chelek] and therefore can also be written as; Speed of light = 100 [distance equator to pole / Chelek].

When the metric system was created in the 1790s, the meter was originally specified as 1/10,000,000 of the distance between the Equator and the North Pole, so the Earth's (polar) circumference was exactly 40,000,000 m (or 40,000 km).

Speed of light 299,792,458 m/s

That is close to a round number 300,000,000 m/s

300,000,000 / 299,792,458 = 1.000692

Mathematical Proof that the World was Created by G-d

$$(300,000,000 / 299,792,458) - 1 = 0.00069228559 \\ = 1 / 1445$$

$$\text{Range} = 400,000,000 - 200,000,000 = 200,000,000$$

$$\text{Resolution} = 300,000,000 - 299,792,458 = 207,452$$

$$200,000,000 / 207,452 = 963$$

$$\text{Probability} = 1 / 963$$

So why are these numbers so close? Less than the fraction of 1 / 1445 apart?

In Torah, if non-kosher food gets mixed up with kosher food, it is still kosher if the following circumstances are met: It would depend on the type of non-kosher food, if there is less than $\frac{1}{2}$, or $\frac{1}{60}$ or $\frac{1}{100}$ or $\frac{1}{200}$ or $\frac{1}{1000}$ of non-kosher food in the kosher food. These numbers can be used in our understanding of the accuracy of these correlations.

So the speed of light is related to the distance from the equator to the north pole. That is not a coincidence.

$$300000000 / 10000000 = 30$$

Light, if it would travel around the world, would travel the distance from the equator to the north pole 30 times in one second. Or exactly 100 times in one chelek!

Eclipse!

Now if we write the speed of light in units of chelek instead of seconds:

The speed of light is 1,000,000,000 meters/chelek

This is to an accuracy of 0.000692

That is a perfectly round number of:

The speed of light = 1,000,000,000 meters per chelek.

The meter was defined as 1/10000000 of the distance from the earth's equator to the north pole.

Now let's define the speed of light using units of chelek and distance from earth's equator to pole:

Speed of light = 100 x (distance from earth's equator to pole) / (*chelek*)

Since time of seconds and *chelek* are defined by being a fraction of a day of earth's rotation, so the speed at the equator is an exact fraction of the speed of light.

1 day = 24x60x18 = 25920 chelek

Speed of earth rotation = 40,000km/day

13. The Sun Rotational Velocity at the Equator is 1 / 150,000 the Speed of Light.

Equatorial rotation velocity of the sun 1.997 km/s

$$299,792,458 / 1997 = 150,121.41117$$

$$150,121.41117/150,000 = 1.0008094 = 1 / 1235.47$$

The sun's equatorial rotation is 1 / 150,000 of the speed of light. That is close to within 1 / 1235

$$(150,121.41117/150,000) - 1 = 0.0008094 = 1 / 1235$$

$$\text{Range} = 200,000 - 100,000 = 100,000$$

$$\text{Resolution} = 150,121.41117 - 150,000 = 121.41$$

$$100,000/121.41 = 823.6$$

$$\text{Probability} = 1 / 823.6$$

14. The Sun's Rotational Velocity at its Equator is Twice the Orbital Velocity of the Moon Around the Earth.

Eclipse!

Equatorial rotation velocity of the sun 1.997 km/s

Moon orbital velocity 1022 m/s

$$2 \times 1022 / 1997 = 0.02353 = 1 / 42$$

$$(2 \times 1022 / 1997) - 1 = 0.02353 = 1 / 42.5$$

$$\text{Range} = 3000 - 1000 = 2000$$

$$\text{Resolution} = 2044 - 1997 = 47$$

$$2000 / 47 = 42.5$$

$$\text{Probability} = 1 / 42.5$$

15. The Earth Orbits Around the Sun at 15 times the Speed that the Sun Rotates at its Equator.

Equatorial rotation velocity of the sun 1.997 km/s

Earth's orbital speed = 29.7827 km/s

$$(15 \times 1997 / 29,782.7) - 1 = 0.00578 = 1 / 173$$

$$(15 \times 1997 / 29,782.7) - 1 = 0.00578523 = 1 / 172.3$$

$$\text{Range} = 40,000 - 20,000 = 20,000$$

$$\text{Resolution} = 29,782 - (15 \times 1997) = 172.3$$

$$20,000/172.3=116$$

$$\text{Probability} = 1/116$$

16. The Moon Orbits the Earth at ~ 30:1 of Earth's Rotation

The significance of the number 30 and 300: Noah's Ark was 30 *Amot* (*Amot* is Cubits, which is about half a meter in length) high, and 300 *Amot* long. The Jewish month is about 30 days because of the lunar month. A person at 30 years old reaches his full strength. - Wisdom of our Fathers 5, 21 (*Pirkei Avot* - *פרקי אבות פרק ה משנה כא - בן שלושים לכח*)

The great commentator on the Torah; Rashi, begins his commentary on Genesis with this teaching: Why does the Torah begin with the story of the creation of the world instead of the first commandment? Because, this is as it says; in the *Psalms* - "To tell his nation about His strength, to give them the Land from other nations." So that if the nations of the world will say to the Jewish People that; "You are robbers because you conquered the land of the seven nations." Then The Jewish People will answer, and say to the other nations, "All of the earth belongs to G-d. He created it and gave it to who was fit in his eyes. It was His will to give it to them, and it was His will to take it from them and give it to us."

Eclipse!

So this is another correlation to 30. A person at 30 years old reaches his full strength; so we see that the number 30 correlates with strength. And in *Psalms* - "To tell his nation about His strength, to give them the Land from other nations." And now we see that G-d told the story of Him creating the world, and He also embedded the number 30 in the architecture of creation.

בתחילת פירושו על התורה, כותב רש"י:

"אמר רבי יצחק: לא היה צריך להתחיל את התורה אלא מהחודש הזה לכם, שהיא מצוה ראשונה שנצטוו בה ישראל. ומה טעם פתח בבראשית? משום: כח מעשיו הגיד לעמו לתת להם נחלת גוים (תהלים קיא). שאם יאמרו אומות העולם לישראל: לסטים אתם, שכבשתם ארצות שבעה גוים, הם אומרים להם: כל הארץ של הקב"ה היא, הוא בראה ונתנה לאשר ישר בעיניו, וברצונו נתנה להם וברצונו נטלה מהם ונתנה לנו".

Moon orbit around Earth (synodic) 29.530 days

$$30 / 29.53 = 0.1591 = 1 / 63$$

$$(30 / 29.53) - 1 = 0.1591 = 1 / 63$$

$$\text{Range} = 40 - 20 = 20$$

Resolution is $30-29.53=0.47$

$20/0.47=42.5$

Probability = $1/42.5$

Now let's calculate the probability of just a few of these things together

The World Can Not be a Random Occurrence

I will now prove that the world was created, and it was not a random occurrence. There is less than one in a hundred million chance that the world came into existence randomly.

Now we can talk about the mathematics of probability and statistics.

How probable is it that the moon has all of these numbers being 40 or a multiple of ten times 40?

1. Earth 40 times brighter than the moon
2. Sun 400,000 times brighter than the moon
3. Sun 400 times larger in diameter than the moon
4. Sun 400 times further away from the earth than the moon is. (this enables a perfectly covering eclipse)
5. The corona of the sun is half the brightness of the full moon, and is only seen during a perfect total eclipse.

Eclipse!

To accurately calculate the probability, we need to define the set:

If we say that the chances of one of these things is at least 1/100 (one in a hundred chance), that does not sound so impressive. But if you consider all of these things together, what are the chances that the earth is also 40 times brighter than the moon, and the other things about the moon and earth are also correlating? So now let's continue this mathematical probability to include a another variable, that the sun is 400,000 times brighter than the moon, those two things together are a one in ten thousand chance. Now let's include the probability of the sun being 400 times larger than the moon in diameter. Together, that is one in one million chance. Now let's add the sun being 400 times further away from the earth than the distance from the moon to the earth. All of these things together is one in one hundred million chance.

This is the way statistics and probability work. The numbers are multiplied, not added. So the chances are of all four things happening are not one in four hundred, but it really is one in one hundred million.

You can test this at home. Take a pair of dice and throw the pair one hundred times. Write down how many times you get double sixes. You will get double sixes about 3 times. You will not get double sixes 8 times. The reason is that when you throw one dice, it has a 1 in 6 chance of giving you a six.

But what are the chances that 2 dice will both give you sixes at the same time? That is not one twelfth, as some people mistakenly assume, but it actually is one chance in thirty-six. Now this makes an even bigger difference when you throw 3 dice at once. What are the chances of all three dice being all sixes at the same time? It is not a one in eighteen chance, but it really is a one in chance in two hundred and sixteen. This is because $6 \times 6 \times 6 = 216$.

This is also why a lottery is so hard to win. I will quote from Wikipedia
https://en.wikipedia.org/wiki/Lottery_mathematics

In a typical 6/49 game, each player chooses six distinct numbers from a range of 1–49. If the six numbers on a ticket match the numbers drawn by the lottery, the ticket holder is a jackpot winner—regardless of the order of the numbers. The probability of this happening is 1 in 13,983,816.

The chance of winning can be demonstrated as follows: The first number drawn has a 1 in 49 chance of matching. When the draw comes to the second number, there are now only 48 balls left in the bag, because the balls are drawn without replacement. So there is now a 1 in 48 chance of predicting this number.

Thus for each of the 49 ways of choosing the first number there are 48 different ways of choosing the second. This means that the probability of correctly predicting 2 numbers drawn from 49 in the correct order is calculated as 1 in 49×48 ...

Eclipse!

(https://en.wikipedia.org/wiki/Lottery_mathematics)

So you see, the probability for you to select the correct number for just 2 balls is not $1/(49+48) = 1/97$ chance, but it is $1/(49 \times 48) = 1/2352$ chance. And so the probability of winning the lottery by correctly selecting all six balls is not one in 279 chance, but it is one in 13,983,816 chance.

So when we have these many correlations, the chance of them all happening by chance is close to zero.

To sum up all the calculations proven in this book:

The chance of this all being by chance is

$= 1 / 9,700,000,000,000,000,000,000,000,000$

The exact probability of all these things happening randomly is:

one chance in 9.7 million x trillion x trillion.

So now that we know this, what do we do now?

Everyone in the world is required to keep the 7 Noahide laws.

What Are the Seven Noahide Laws?

The 7 Noahide Laws are rules that all of us must keep, regardless of who we are or from where we come. Without these seven things, it would be impossible for humanity to live together in harmony.

1. **Do not profane G-d's Oneness in any way.**
2. **Do not curse your Creator.**
3. **Do not murder.**
4. **Do not eat a limb of a still-living animal.**
5. **Do not steal.**
6. **Adultery with a married woman, incest, and homosexual relations are forbidden.**
7. **Establish courts of law and ensure justice in our world.**

Eclipse!

These laws were communicated by G-d to Adam and Noah, ancestors of all human beings. That is what makes these rules universal, for all times, places and people.

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And help spread the word!

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