

AHA Newsletter

APRIL 2021

AL-HIDAAAYAH ACADEMY, GWARINPA, ABUJA.

From the head teacher's desk

Assalam alaykum warahmatullah wabarakatuh dear Al-Hidaayah Academy Parents,

This is hoping everyone had a rewarding Ramadan and a memorable eid. Eid mubarak to all our families.

I thought to mention or remind us all how important it is to spend time with the people we love and care about. So many of us have lost people or know someone who has lost someone in the past month. Let us make time to spend with our kids, our parents for those who still have theirs, our siblings and our friends.

We thank Allah for permitting us complete this year's Ramadan, we ask Him to grant us many more - in ease, good health and faith, aamiin.

School resumes on Monday, May 17 bright and early in sha Allah (and closing time returns to 4pm).

If your child will be on the school lunch and you haven't paid, please do so before the end of Saturday May 15 and be sure to send us evidence of payment with your child's name on it. Links to the menu will be sent out today so that your child(ren) can make their meal choices.

There will also be clubs and we will be sending choice forms for clubs in sha Allah.

As we resume the term and start the journey to the end of the school year, please support us by supporting your child on a regular basis. Do check up on the kids and their work regularly, ensure they have what they need to facilitate learning while at school and please remind them often of the need to follow rules, be kind and put their best foot forward everyday.

As always, if you have any queries or questions, please contact the school admin who will direct your query to the appropriate member of staff. My door is always open so please feel free to contact me or my deputy.

Important dates in May, 2021

DATE	EVENT
May 22 nd	Entrance Exam
May 28 th	Parents Teachers Committee (PTC) Meeting
May 31 st	CAT Begins

We ask Allah to grant us success in all our endeavours. Stay safe everyone. May Allah's blessings and protection be with you, aamiin.

Ms. Hameedah
Ag. Head teacher

By: Sakannah Abdullahi Haruna (Year 8)

As we approach the last 10

*The righteous ones cheer
To witness the last 10 days that are almost here.
With these days, they do not joke
Bearing in mind its lofty barakah, their Lord they extremely
invoke.*

*In these 10 days, we must also remain steadfast
And grab the opportunity for its blessings to last.
In one of the 10 days holds the Night of Power
So pray to your Lord, and on you let His rahmah shower.*

*The doors of Al-Khabeer are always open
His promise of acceptance is never broken.
It is the night when everything is decreed
That night, everything is guaranteed.*

*It is the night when the Qur'an descended
In a divine trip, to Baytul Izzah it wended.
Make use of what this night offers
Than wait for the next when it reoffers.*

*This is the month of Quran and goodness
To be used to its extreme fullness.
The Night of Decree is better than a thousand months
Which only returns every twelvemonth.*

*Late at night, rise for tahajjud
Pray like you really truly should.
Duas at this early hour readily accepted
He hears it all, He Who is the Most Elevated.*

By: Haneef Musa Hassan (Year 7)

As the month is going to an end...

*Youngsters, during the day, stop being in a mood
You will soon have food.
But don't just anxiously wait for the Iftaar
Make dua, ask to be kept from sins afar.*

*Recite the Holy Quran as much
Each and every sunnah try to clutch.
Practice the beautiful way of our Prophet
And for eternity hereafter increase your profit*

*Ramadhan, we will miss you
And all the righteousness that occurred in you.
We shall strive to keep this mode going,
And even in your absence we shall avoid all evildoing.*

*“Aqarra'llaahu a'yunanaa fee Ramadaan...”
Waj'ma' qiyaamana wa tilawatana fil meezaan
Rabbana 'rzuqnaa bi lazzatil as'haar,
Wa majjidnaa bi suh'batil akhyaar.*

RAMADHAN MUBARAK !!!

Department for the month - Mathematics

We all use maths in everyday applications whether we're aware of it or not. If you look well enough, you will see maths present in some of the most unlikely places. Mathematics is the universal language of our environment, helping mankind explain and create. From the class room to the outside world, maths is vital to helping students fine tune their creativity and turn their dreams into reality.

Mathematics in the kitchen



Figure 1: <https://happinessishereblog.com/wp-content/uploads/2014/07/cake1.jpg>

Students in Year 7 and 8 were exposed to the concept of ratio, measurements and fractions – a topic many students were able to relate with because of its every day application

One very important application of ratio, measurement and fractions is the kitchen. Cooking and baking are nothing but mathematical algorithms or self-contained, step-by-step sets of operations to be performed. The proof is in the pudding.

Working in the kitchen requires a wide range of mathematical knowledge, including but not limited to

- Measuring ingredients to follow a recipe
- Multiplication, division, fractions and ratio skills to account for much larger quantities
- Converting a recipe from Celsius to Fahrenheit and vice versa.

- Converting a recipe from metric to commonly used standard units (teaspoon, tablespoon, tin cups, mudus etc.)
- Calculating cooking time and intervals between ingredients.
- Applying ratios and proportions, particularly in baking (example: the recipe requires 1 egg and 2 cups of flour, then the ratio of eggs to flour is 1:2).

Commonly used measurements

A 50 kg bag of grain = 33 mudus (approx.)

1 standard mudu = 8 tin cups (a cup is one eighth, $\frac{1}{8}$ of a mudu)

1 mudu = 1.5 kilograms

1 tablespoon = 14.79 ml

1 teaspoon = 4.92 ml

Approaching mathematics this way made it less abstract, more fun and engaging for the kids.

Number patterns and sequence



Figure 2:

<https://i.pinimg.com/564x/4e/9d/03/4e9d03d3ce0103a958c578e751d6e30b.jpg>

Repeating numbers and patterns can show up just about anywhere. Maybe you pause a YouTube video at exactly 3:33 or see that the washing machine has exactly 1:11 left on its cycle. Or for others, a till receipt, invoice or bank statement will always add up to a version of their birthdate, a lucky number or any other number sequence that has personal value. Computers themselves are nothing but a carefully arranged pattern of ones and zeros – a sequence so absolute that a disruption in a single digit can affect the computer’s functionality. Repeating patterns can be found in nature and in our everyday life.

Students in Year 10 learnt about number sequences where they came across the Fibonacci sequence, a concept introduced into main stream mathematics by Leonardo Pisano (Fibonacci). The sequence was used to calculate the growth of rabbit populations.

Fibonacci considers the growth of an idealized (biologically unrealistic) rabbit population, assuming that: a newly born breeding pair of rabbits are put in a field; each breeding pair mates at the age of one month, and at the end of their second month they always produce another pair of rabbits; and rabbits never die, but continue breeding forever. Fibonacci posed the puzzle: how many pairs will there be in one year?

- At the end of the first month, they mate, but there is still only 1 pair.
- At the end of the second month they produce a new pair, so there are 2 pairs in the field.
- At the end of the third month, the original pair produce a second pair, but the second pair only mate without breeding, so there are 3 pairs in all.
- At the end of the fourth month, the original pair has produced yet another new pair, and the pair born two months ago also produces their first pair, making 5 pairs.

- At the end of the twelfth month there were 144 pairs of rabbits.
- The sequence is such that each number is the sum of the two preceding ones.

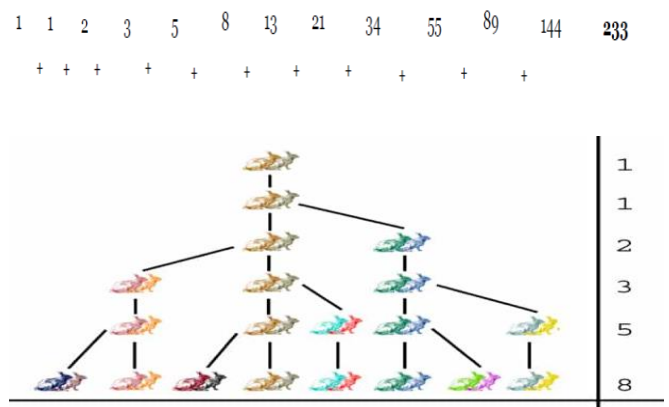


Figure 3 : <https://www.mathscareers.org.uk/wp-content/uploads/2015/03/FibonacciRabbits1.jpg>

Applications of Fibonacci sequence

- Computer algorithms
- In biological settings, such as branching in trees, the arrangement of leaves on a stem, the fruit sprouts of a pineapple, the flowering of an artichoke, an uncurling fern, and the arrangement of a pine cone's bracts.
- Fibonacci retracement levels are widely used in technical analysis for financial market trading.

The golden ratio, golden rectangle and Fibonacci spiral

Let’s look at the ratio of each number in The Fibonacci sequence to the one before it:

$\frac{1}{1} = 1$	$\frac{5}{3} = 1.666$	$\frac{13}{8} = 1.625$	$\frac{34}{21} = 1.61905$
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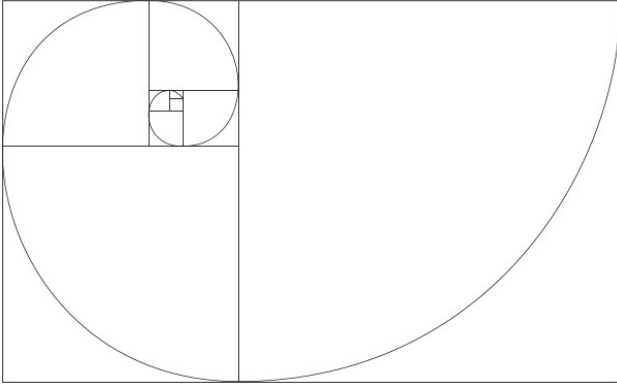
If we keep going, we get an interesting number which mathematicians call “phi” (Golden Ratio or Golden Ratio). It is denoted by Φ and the value;

$$\Phi = 1.6180339887$$

Using the golden ratio, the dimensions of a rectangle can be divided repeatedly to form a **golden rectangle**

within which there are perfect squares that get smaller towards the centre. When the ends of these squares are joined together using a curve, a **Fibonacci spiral** is formed.

In fact it has been found on so many different natural, architectural and graphic designs of the world.



The golden rectangle and Fibonacci spiral.

In conclusion

Mathematics is a creative and highly interconnected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject.

The fibonacci spiral can be found in so many places unimaginable...



Figure 4: https://99designs-blog.imgix.net/blog/wp-content/uploads/2019/08/1_Ju2SLrbL42M59kkd9ufsHw.jpg?auto=format&q=60&fit=max&w=930