

27-Jan-2026

Term 1/Week 1

Introduction

- Introduce "Sesha" & "Prasad"
- Professional Background
- Review of last year (2025)

Term #1 - History of Maths (Decimal Not)

* Brahmagupta (600 AD)
(Doctrine of God!)

* Al-Khwarizmi (800 AD)
(Hisal-Al-Hind)

* Fibonacci (1200 AD)
(Liber Abaci
- Modus Indorum)

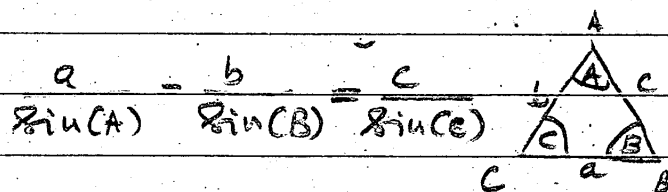
- Babylonians (1800 BC) (Base 60)

* Calculation of Square Root

$$x = \sqrt{s} = a + \frac{(s-a)^2}{2a}$$

Term #2

- Algebra Basics overview
- Trigonometric functions
- Law of Sines



- Triangulation / Surveying
- Trigonometry - Examples

- 3 -

- 4 -

Term #3

- Latitude calculations
- Latitude by shadow
- Sun's elevation
- Longitude
- Solar Hour Angle & Solar Time

Term #4

- Solar Time, GMT & Local time
- Equation of Time
(Solar Time → Local Time)
- Distance bet two points on Earth
- Location using GPS
(Global Positioning System)
- Einstein's Relativity Effect on GPS!

- Satellite have extremely accurate clocks.
- However, they do slow down relative to the stationary clocks on Earth, as per Einstein's theory of relativity!

- Hence, they need to be corrected, for accurate distance measurement between satellite & GPS device.

- Refer to:
"Beshveda.com" web site
"U3A Maths" Menu item
2025 - Term 4 / Week 9 notes