DIGITAL ALBUM

SUBMITTED BY

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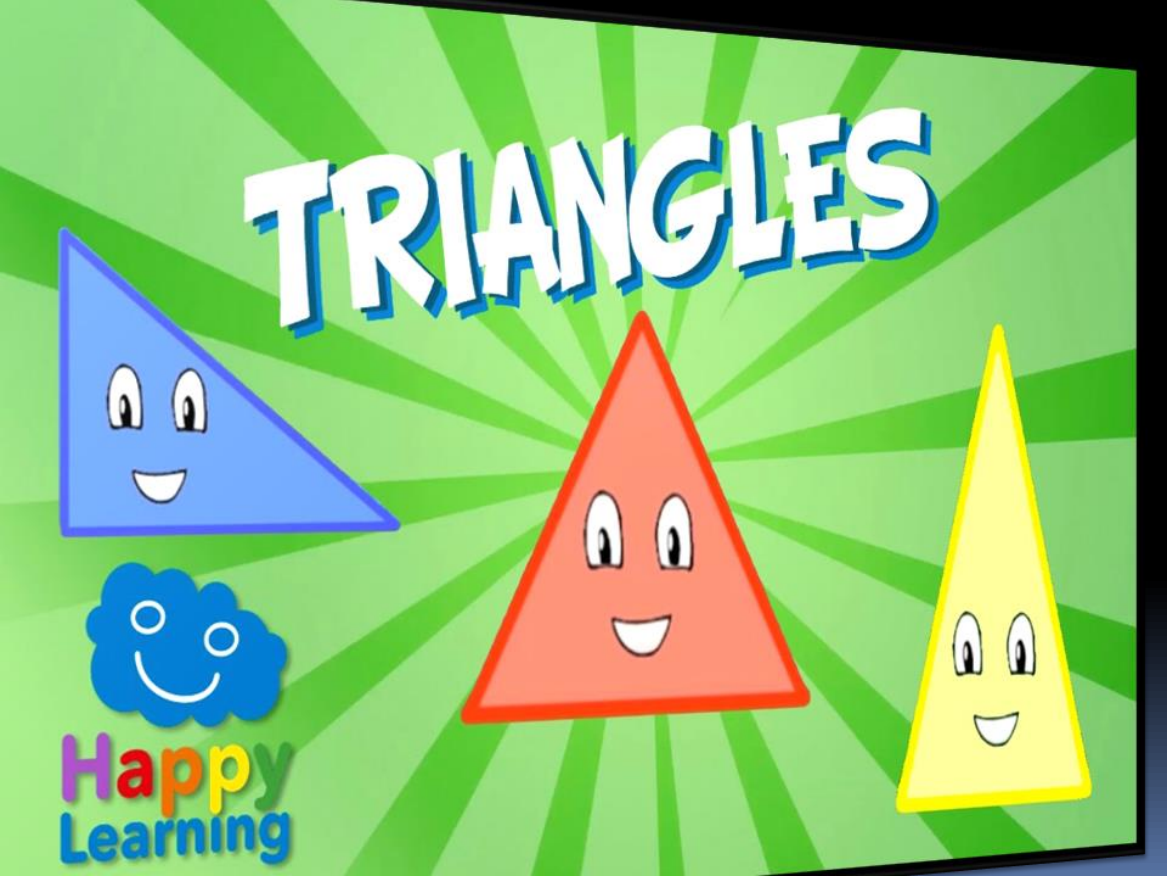
MATHEMATICS PEDAGOGY

S.N COLLEGE MUVATTUPUZHA

CONTENTS

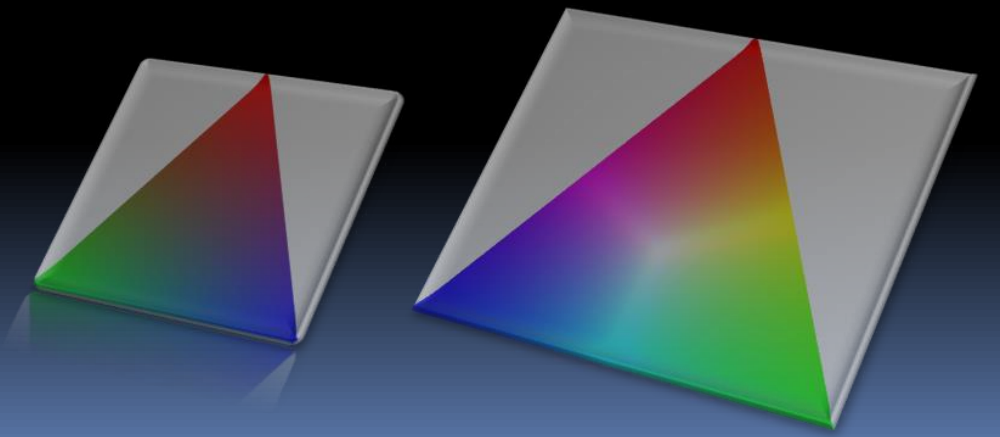
- Triangles
- Different types of Triangles
- Definitions
- Similar Triangles
- Trigonometry


TRIANGLES
Happy
Learning

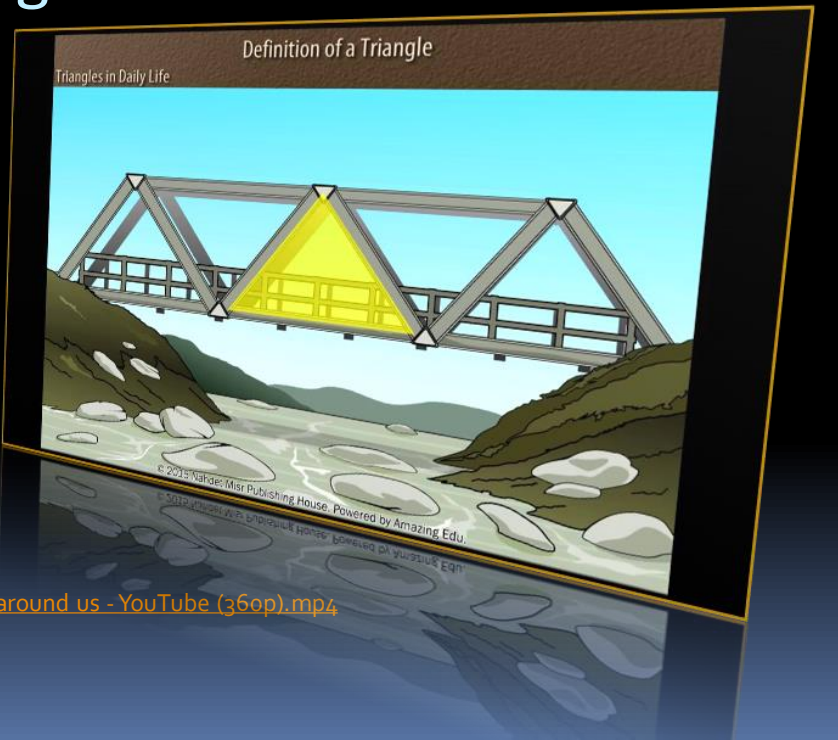
What is a Triangle?

A triangle is a closed figure with three sides,three vertices and three angles.

Eg:



Triangles around us.



- triangles around us - YouTube (360p).mp4

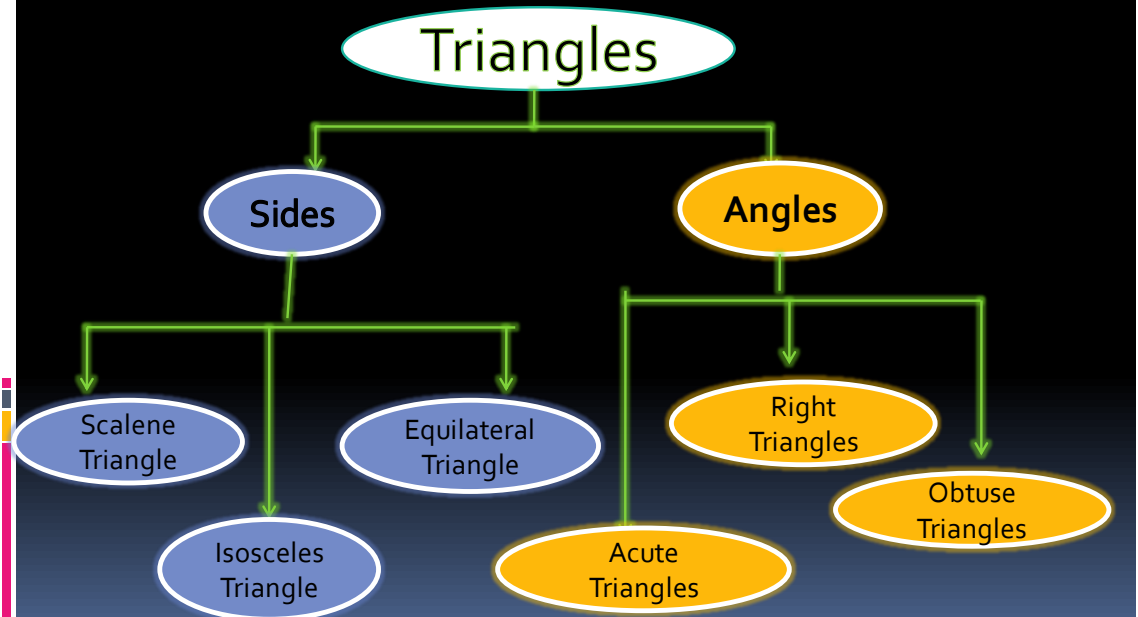
Different types of Triangles

3 sided plane shape

3 Sides
3 Angles

MooMooMath and Science

Classification of Triangles

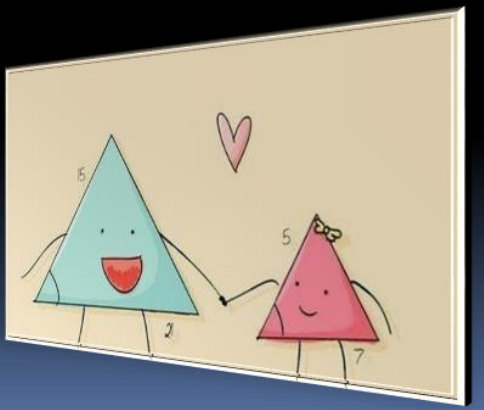


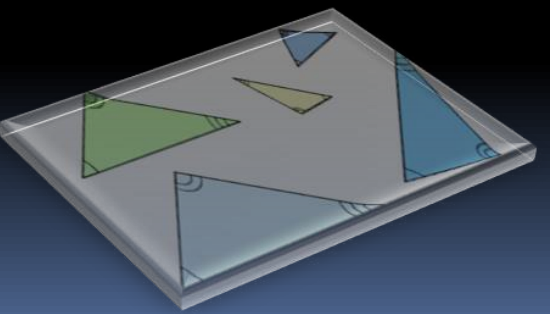
Types of Triangles

- What are the Different Types of Triangles - YouTube (360p).mp4

Similar Triangles

- Similar triangles are triangles with equal corresponding angles and proportionate sides.





Rules for Similar triangles

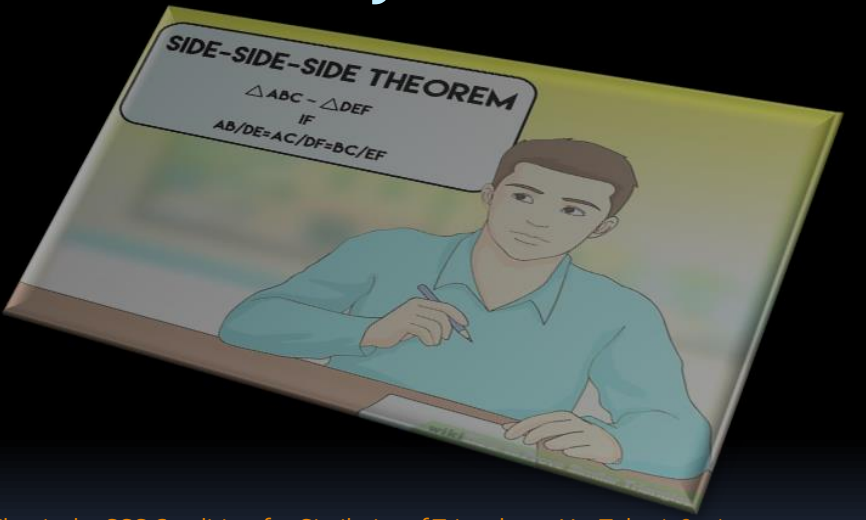
Triangles are similar if:

- Two pairs of sides in the same proportion and the included angle equal.(SAS similarity condition)
- All three pairs of corresponding sides are in the same proportion.(SSS similarity condition)
- All three pairs of corresponding angles are equal.(AAA similarity condition)

SAS Similarity Condition

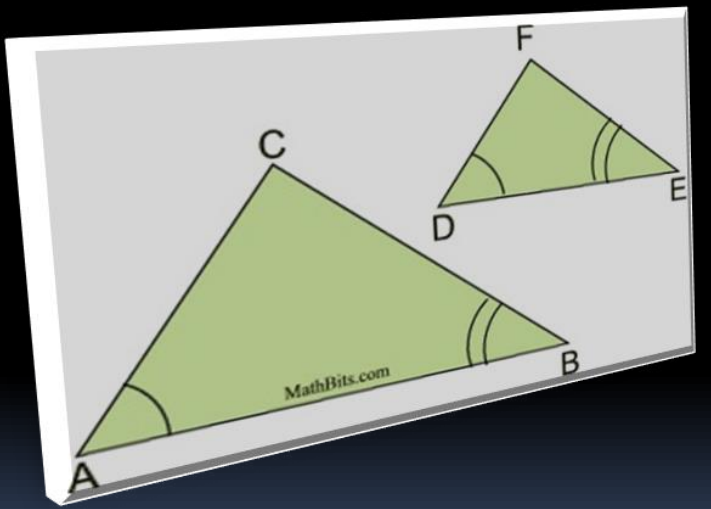
- What is the SAS Condition for Congruence_ - YouTube (360p).mp4

SSS Similarity Condition



- What is the SSS Condition for Similarity of Triangles_ - YouTube (360p).mp4

AA Similarity Condition



- What is the AA Condition for Similarity of Triangles_ - YouTube (360p).mp4

Trigonometry

- Consider a right triangle

Trigonometry Lessons Part 1_ Definitions - YouTube (360p).mp4

Write Yes or No

- Is it possible to measure the height of a tall building.

yes

No

Application

θ

Opposite Side

Adjacent Side

- We have

$$\tan\theta = \frac{Opposite\ \ Side}{Adjacent\ \ Side}$$

Opposite Side = Adjacent Side $\times$ tan θ

Trigonometric Ratio

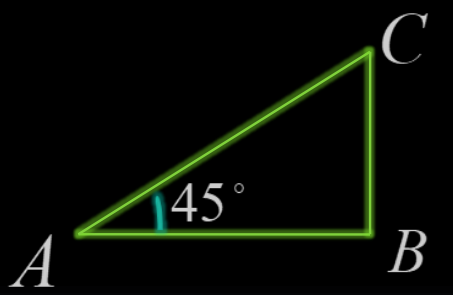
	0°	30°	45°	60°	90°
Tan ϕ	0	$\frac{1}{\sqrt{3}}$	1	$\sqrt{3}$	*Not defined*

PROBLEM

- Consider a right triangle ABC, with AB= 4 m & $\theta = 45^\circ$ .Find BC.

Sol:

We have



$$\tan\theta = \frac{Opposite\ \text{Side}}{\text{Adjacent Side}}$$

- From the figure,

$$\tan\theta = \frac{BC}{AB}$$

Here $\theta = 45^\circ$, AB= 4 m.

$\tan 45° = \frac{BC}{4}$

$\therefore \quad 1 = \frac{BC}{4}$

ie, BC = 4m

THANKYOU !