

APPLICATIONS OF TRIGONOMETRY IN REAL LIFE



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WHAT IS TRIGONOMETRY?

- Trigonometry is primarily a branch of mathematics that deals with triangles, mostly right triangles. In particular the ratios and relationships between the triangle's sides and angles.

ORIGIN OF TERM TRIGONOMETRY:

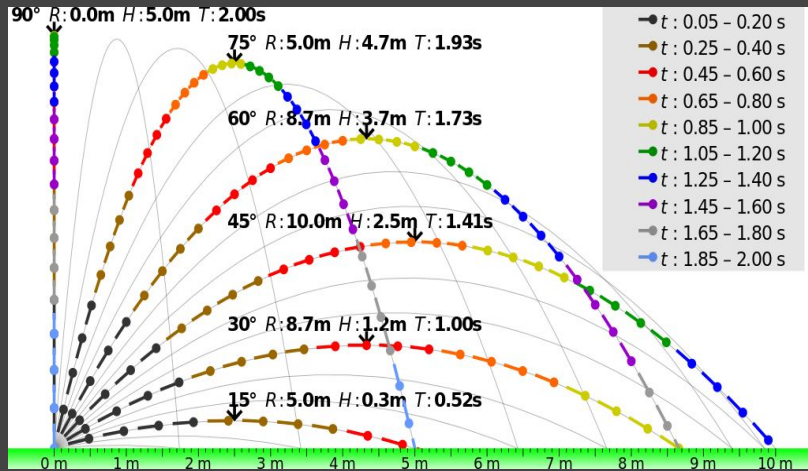
- The first part of trigonometry is from **Greek word Trigon** “**triangle**”.
- The second part of trigonometry is from **Greek word metron** “**measure**”



HOW IS IT USED?

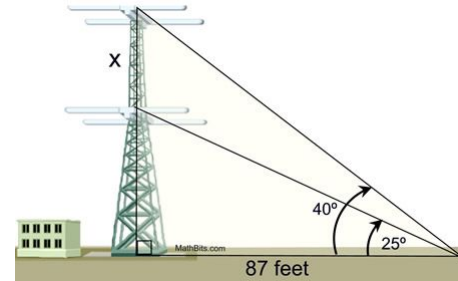
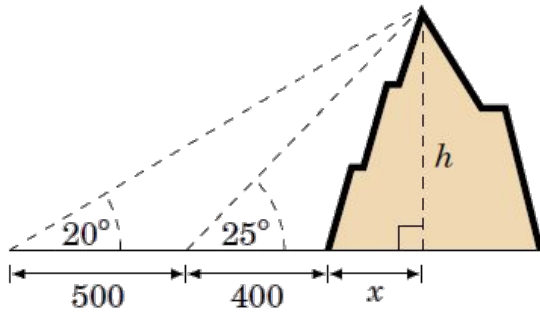
Physicist

- Physics use the three trig functions (Sine, Cosine, and Tangent) when dealing with projectile object. if they know the angle at which an object was launched and the horizontal or vertical complements, they can find the resolved complement.

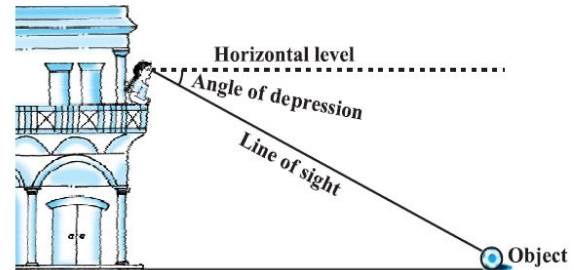


Height Of Any Tall Object

- If you know the distance from where you observe any tall object (building, tower, or/ & mountain) and the angle of elevation you can easily find the height of that object by using trigonometry function.

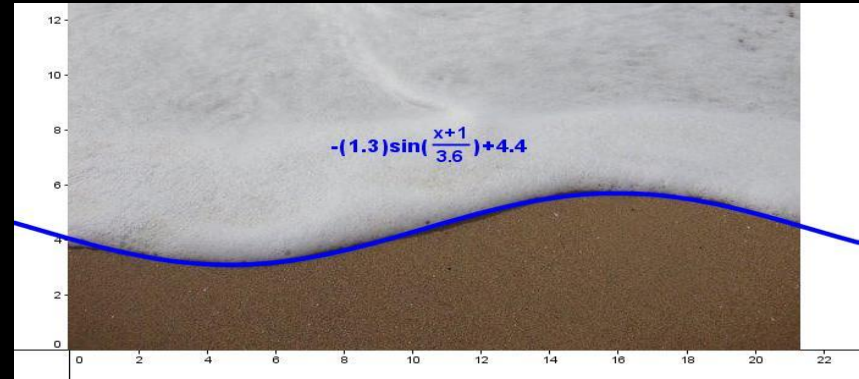
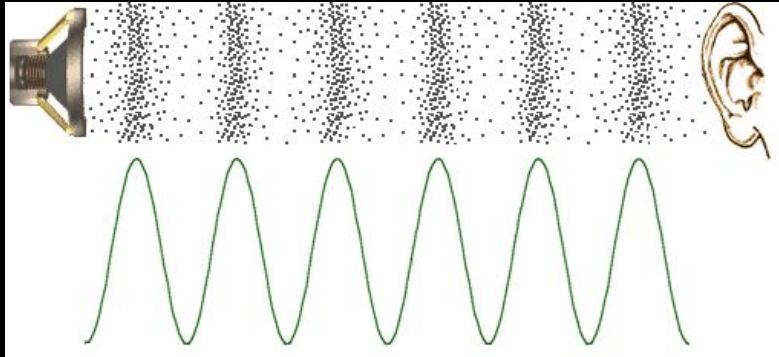


- Similarly, if you have the value of one side and the angle of depression from the top of that object you can find and another side in the triangle.

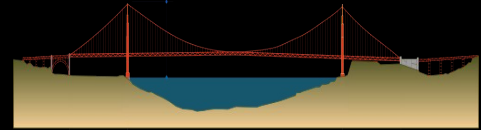


Sine Waves In Nature

- Sound waves are sine waves whenever we listen to music we are actually listening to sound waves.
- Alternating current is a sine wave.
- Ocean, Radio and Light waves are also sine waves.



Construction

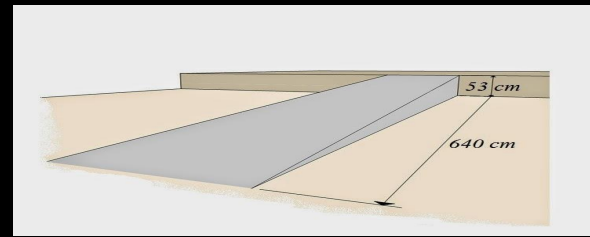
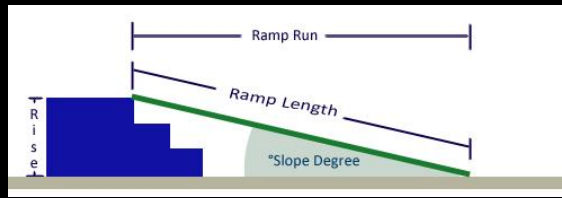


Calculating Bridge Length

- Trigonometric methods are essential for how long a bridge need to be. A conductor might use right angle properties and tangents to determine how wide a river is, which directly determines the length of the bridge.

Wheelchair Ramps

- An example of using trigonometry when building Ramps is if a ramp has to be at an angle of 6 degrees for maximum safety, and you know how high the exit is from the ground, then you can calculate the ramp's necessary length using the tangent ratio from a right triangle.





Work Cited

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