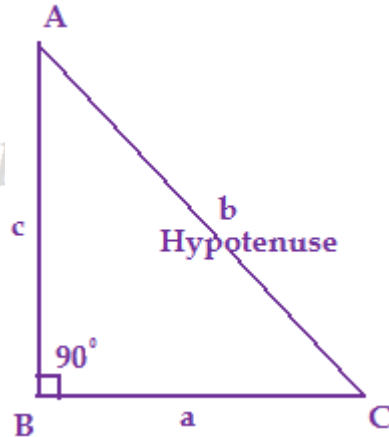


Mathematrixcks

- Sreenivasa Rao Ainapurapu.

Vivek then drew a picture as shown in the right and explained the various things about various ratios. “If ABC is a right angled triangle, then AB, BC, AC are sides, which are also represented by lower case letters c,a,b respectively. Side c means AB (which is opposite to angle C). In our figure B is the right angle, so AC (or b) is the opposite side (longest side), which is called hypotenuse. For a given angle (say A), we can find six different ratios called trigonometric ratios.”



“How? Can you explain?” asked Sunil.

Vivek explained “For finding those six ratios, we need to know opposite side, adjacent side and hypotenuse. In the figure above, for angle A, opposite side is BC (or a); Adjacent side is AB (or c) and hypotenuse is AC (or b). Now, who is going to tell the ratios?”

“The ratios are called Sine A, Cosine A, Tangent A, Cosecant A, Secant A, Cotangent A; often called Sin A, Cos A, Tan A, Cosec A, Sec A and Cot A respectively.” said Sudhakar and wrote those ratios, how they are defined as shown in the below table.

S. No.	Ratio	Formula	Value
1.	Sine A	Opposite side/Hypotenuse	BC/AC or a/b
2.	Cosine A	Adjacent side/Hypotenuse	AB/AC or c/b
3.	Tangent A	Opposite side/Adjacent side	BC/AB or a/c
4.	Cosecant A	Hypotenuse/Opposite side	AC/BC or b/a
5.	Secant A	Hypotenuse/Adjacent side	AC/AB or b/c
6.	Cotangent A	Adjacent side/Opposite side	AB/BC or c/a

Vivek gave a high-five and said “Great job Sudha!” Rest of the kids also joined hands with Vivek in joy.

(Let us continue in the next issue, till then good bye!)