

TRIG FUNCTIONS & RECIPROCAL

FUNCTION	ABBR	DEFINITION	Alternate DEF
sine	sin	opp/hyp	---
cosine	cos	adj/hyp	---
tangent	tan	opp/adj	sin/cos
cosecant	csc	hyp/opp	1/sin
secant	sec	hyp/adj	1/cos
cotangent	cot	adj/opp	1/tan

opp = opposite side
adj = adjacent side

csc, sec and cot are called
"reciprocal" trig functions

What does "co" mean, as in co-sine?

"Co" is short for complementary.

Complement – means to complete
Compliment – is something nice you say

Complementary angles are those that add up to 90° .

20° and 70° are complementary angles.

In the triangle on the right, A and B are "co" angle.

That is, $A + B = 90^\circ$.

If you look at the triangle, you'll see that

$$\sin A = \cos B$$

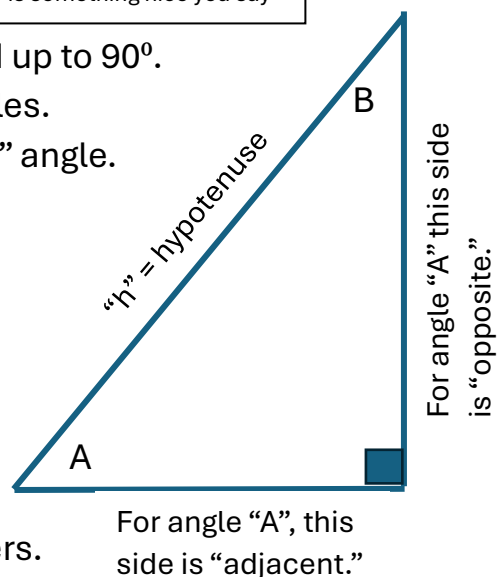
$$\tan A = \cot B \text{ (and the other way around)}$$

This is always true for right angle triangles.

The sin of one angle will be cos of the others.

The tan of one will be the cot of the other.

The sec of one will be the csc of the other.



By a strange twist, $\cot B$ is both complementary to $\tan A$ and it's reciprocal.