

MAGOOEY'S MATH PROBLEMS

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The Sign of Sine (and other trig functions)

Synopsis. The following is a trick to remembering the sign of the trigonometric functions in each of the four quadrants of the plane. Recall that there are four quadrants to the plane.

Quadrant I	$x > 0, y > 0$
Quadrant II	$x < 0, y > 0$
Quadrant III	$x < 0, y < 0$
Quadrant IV	$x > 0, y < 0$

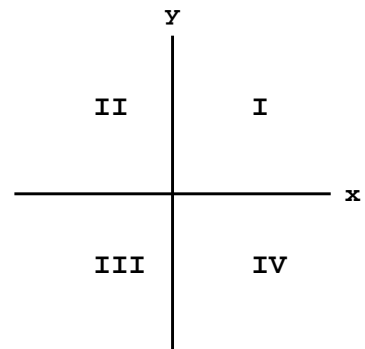


Fig. 1

Graphically they are represented as in Figure 1. We note that all the trig functions are positive in Quadrant I, only sine is positive in Quadrant II, only tangent is positive in Quadrant III, while just cosine is positive in Quadrant IV.

If you remember that the ancient Greek mathematician Pythagorus made his mathematical community into something of a religious SECT, then starting from Quadrant II and going clockwise, we have

Sine, Every, Cosine, Tangent

as the positive trigonometric functions in each quadrant.

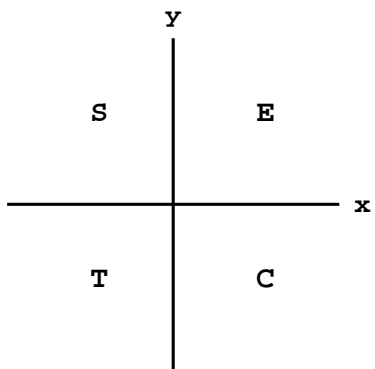


Fig. 2

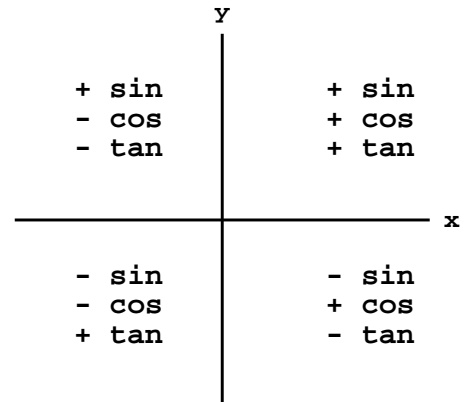


Fig. 3