Half Angle ≠ Half of the Pitch or Rise ÷ Run

Pitch = Rise ÷ Run = $\tan \theta$

θ = arc length ÷ radius.

Arc length of the unit circle = value of angle θ in radians

The radius of the circle can be any value; everything remains proportional. Bisecting the angle means bisecting the arc of the circle.

For *very* small angles, the angle bisector *nearly* bisects the rise ÷ run. As the value of the angle approaches 90 °, the rise and therefore the rise ÷ run for θ increase without limit.

The limiting value of the half-angle = 45 °.

The value of the half-angle rise **cannot exceed the radius of the circle**; hence the half-angle rise ÷ run = 1.