

# Trigonometric Functions

AtScale supports the following MDX trigonometric functions in a calculated measure formula.

Function Signature	Description
<code>acos(numeric_expression)</code>	Returns the angle, in radians, whose cosine is the specified float expression.
<code>asin(numeric_expression)</code>	Returns the angle, measured in radians, whose sine is the specified float expression.
<code>atan(numeric_expression)</code>	Returns the measurement of the angle, in radians, whose tangent is the specified float expression.
<code>cos(numeric_expression)</code>	Returns the cosine of the specified angle, which is in radians, as a float expression.
<code>exp(x)</code>	Returns $e^x$ where $e$ is the base of the natural logarithm.
<code>sin(numeric_expression)</code>	Returns the sine of the specified angle, which is in radians, as a float expression.
<code>tan(numeric_expression)</code>	Returns the tangent of the specified angle, which is in radians, as a float expression.

Example:

```
3959 * ACOS(COS((PI()/180) * [Y])
* COS((PI()/180) * [X])
* COS((PI()/180) * [CentralLat])
* COS((PI()/180) * [CentralLong])
+ COS((PI()/180) * [Y])
* SIN((PI()/180) * [X])
* COS((PI()/180) * [CentralLat])
* SIN((PI()/180) * [CentralLong])
+ SIN((PI()/180) * [Y])
* SIN((PI()/180) * [CentralLat]) )
```