- study of angles and triangles

We name the sides of right triangles in relation to one of its acute angles.

\[
\begin{align*}
\tan \theta &= \frac{O}{a} \\
\sin \theta &= \frac{O}{h} \\
\cos \theta &= \frac{a}{h}
\end{align*}
\]

TOA, SOH, CAH

Ex. #1

* calculator is in [**Degree**] mode: DGR or D

(a) \( \sin 30^\circ = 0.5 \)

(b) \[
\begin{align*}
\tan 30^\circ &= \frac{2}{a} = \frac{2}{x} \\
0.57 &= \frac{2}{x} \\
x &= 0.57 \\
\end{align*}
\]

\[
\frac{0.57 \times 2}{0.57} = 2
\]

\[
\frac{0.57}{0.57} = 1
\]
\[ x = 3.46 \approx 3.5 \text{ cm} \]