$$\begin{aligned}
z &= z\ axis\ acceleration(downward) \\
y &= y\ axis\ acceleration(outward) \\
\sqrt{y^2 + z^2} &= a_{tilt} \\
\theta_{tilt} &= \arccos \frac{z}{\sqrt{y^2 + z^2}} \\
\theta_{tilt} &= \arcsin \frac{y}{\sqrt{y^2 + z^2}} \\
\theta_{tilt} &= \arctan \frac{y}{z}
\end{aligned}$$