

Acceleration on an Inclined Plane

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Abstract

We use a vector-based graphical method to show that the acceleration of an object sliding without friction on an inclined plane is $a = g \sin \theta$, where θ is the incline angle in degrees. Our formula has the advantage of being easy to derive and predicts correct accelerations of $a = 0$ at $\theta = 0^\circ$ and $a = g$ at $\theta = 90^\circ$. Measured accelerations will be reported and compared with this formula in a future paper.
