

Answer on Question #45484 – Physics - Mechanics | Kinematics | Dynamics

It is represented by the slope of the graph when velocity or speed is plotted against time.

Tangent of slope angle of the graph when velocity or speed is plotted against time is equal to the derivative of a function $v(t)$

$$\operatorname{tg}(\phi) = \frac{dv(t)}{dt}$$

As we know, $\frac{dv(t)}{dt}$ is an acceleration a .

So, slope angle is

$$\phi = \operatorname{arctg}(a)$$

Answer: the slope of the graph velocity against time is equal to arctangent of acceleration.