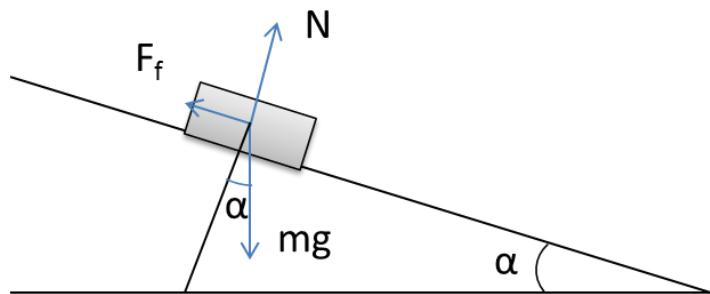


Answer on Question #48098, Physics, Mechanics | Kinematics | Dynamics

What is the  $\mu$  of between a 520 kg wooden crate and the concrete ramp ( $15^\circ$ ) that it is sitting on?

**Solution.**



1<sup>st</sup> Newton's law:

$$\sum \vec{F} = 0$$

$$mg \cdot \cos \alpha = N$$

$$mg \cdot \sin \alpha = F_f$$

$$F_f = \mu N$$

So:

$$mg \cdot \sin \alpha = \mu mg \cdot \cos \alpha$$

$$\mu = \tan \alpha = \tan 15^\circ \approx 0.27$$

**Answer:**  $\mu \approx 0.27$