Forces on Ramps

Friday, January 06, 2012 9:38 AM

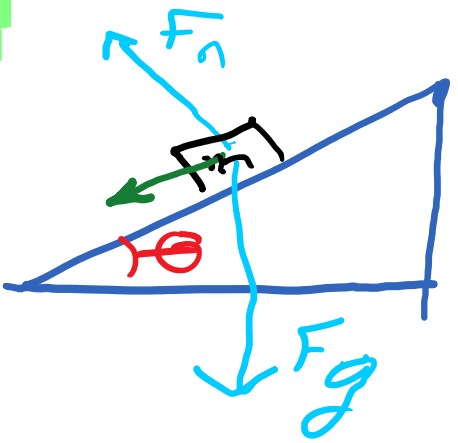
Use if need $F_f = \mu F_n$

A ramp is a sloped surface AKA: the inclined plane

F_g = straight down

F_n = support force 90° surface

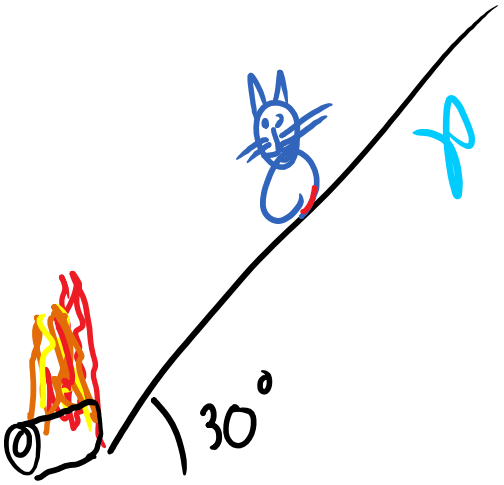
$F_n = F_g \cos\theta$



$F_{ramp} = F_g \sin\theta$

Use this to find F_{net} on a ramp

A cat of mass 10 kg is on a frictionless ramp inclined at 30°, what is the unbalance Force acting on the cat?



$F_{ramp} = F_g \sin\theta$

$= mg \sin\theta$

$= 10(9.8)\sin 30$

$=$

$= 10\ 9.8) \cos 30 = 8$