

**PHYSICS****FRICION**

Definition:

TYPES

1. **Static** -
2. **Kinetic** -

CO-EFFICIENT OF FRICTION

A number that represents how much friction two surfaces will generate. Smoother objects have a low friction coefficient while rougher objects have a larger friction coefficient.

Formula:

$$\mu = \frac{F_F}{F_N}$$

μ -

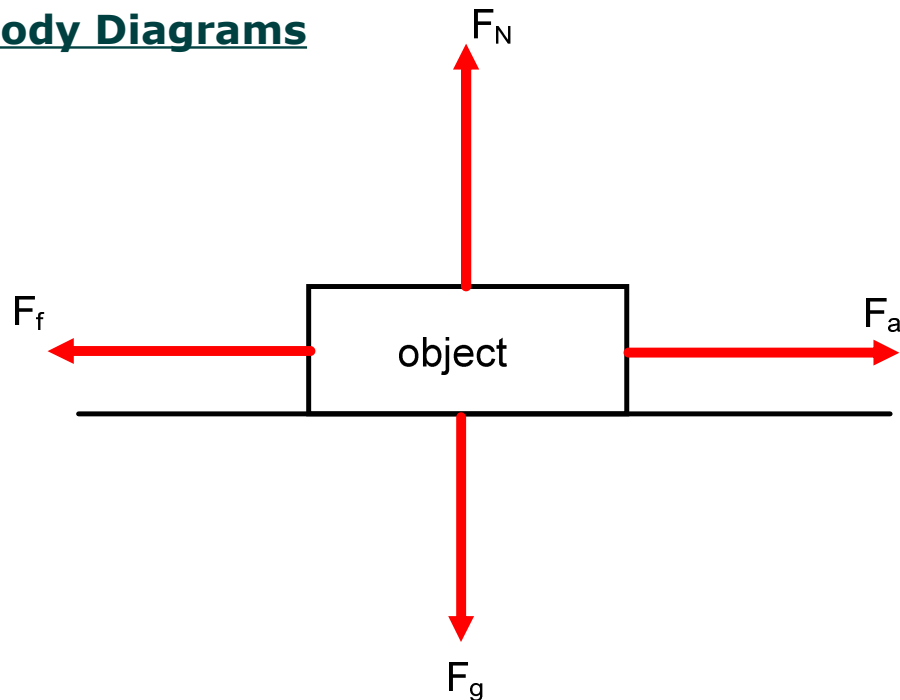
F_F -

F_N -



PHYSICS

FRICTION

Free-Body Diagrams

Note: For objects on the ground $F_N = F_g$

EX: What is the coefficient of friction if it takes 50 N to pull a 6.0 kg object along a desk at constant speed?

**PHYSICS****FRICION**Common Coefficients of Friction

Steel on Ice 0.01

Rubber on dry road 1.02

Rubber on wet road 0.97

Ex 2: A 20.0 kg toboggan is pulled along at a constant speed by a horizontal force of 30.0 N.

a) What is the coefficient of friction?

b) How much force is needed to pull the toboggan at constant speed if two 60.0 kg girls are sitting on it?