

Frictions "Cheat" sheet

 μ Basic Formula $\mu = \frac{F_f}{F_n}$

- 1 If an object is on level ground accelerating + or - then $\mu = a/g$
- 2 If an object is being pulled on level ground at a constant speed $F_f = F_p$
- 3 On level ground $F_n = F_w = mg$ assuming the object is not being pulled upwards
4. If an object is sliding down an incline at constant speed $\mu = \tan \theta$ In this case, remember that $F_f = F_p$
5. If the object is accelerating, the downwards force is $F_d = F_p - F_f$
 or $\mu = \frac{mg \sin \theta - ma}{mg \cos \theta}$
6. If the object is being pulled up the incline at a constant speed $F_{pull} = F_f + F_p$