**Friction Noteguide Videos 4F Name**

Friction - Force needed to drag one object across another. (At a constant velocity):

Depends on:

Not supposed to depend on:

Table from the book: (IB calls kinetic friction "dynamic")



**D**ynamic Friction - Force needed to keep it going at a constant velocity. (AKA Kinetic friction)

FF = μdR

Always in opposition to velocity (direction it is sliding)

**St**atic Friction - Force needed to **st**art motion.

FF < μsR

Keeps the object from moving if it can.

Only relevant when object is stationary.

Always in opposition to applied force.

Calculated value is a maximum



Try these Whiteboards - watch the video if you can't get them.

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| 1. What force is needed to start to slide a 45.0 block of rubber across dry concrete? (441 N ) | 2. What force is needed to continue to slide a 32.0 block of wood across a wood floor? (62.8 N ) |
| 3. What force is needed to begin sliding a 921 kg block of ice across a frozen lake?What force will it then take to keep it sliding? (904 N, 271 N ) | 4. What force is needed to begin sliding a 2350 kg car across wet concrete? (16,100 N ) |
| 5. What is the mass of ice you have if it takes 12.0 N of force to slide it at a constant speed across ice? (40.8 kg ) | 6. You have a 2.1 kg block of plastic and it takes you 8.65 N of force to slide it at a constant speed across your Formica table. What is the coefficient of friction? (0.42 ) |