Friction Questions – Coefficients of Friction and F = ma

Static Friction $f_{s} = UsFn$ **Kinetic Friction** $f_{k} = UkFn$

(force to start object moving)

Horizontal surface $f_{s} = Us\ \mathbf{w}$ $f_{k} = Uk\ \mathbf{w}$ **AND** $w = mg$

Ex 1) A 1000 N car skids on a wet concrete road. If the road is **horizontal**, what is the friction force on the car?

Ex 2) A skier is being pulled along a horizontal surface **at constant speed** with a force of 50 N. What is the weight of the skier?

Ex 3) A 10 kg block of wood sliding on a horizontal wooden table is brought to rest. What is the force on the block of wood that caused it to stop?

Ex 4) A 53. kg block, slowed by friction, has an acceleration of -0.1 m/s2. What is theforce of friction on the block?