Name: Number: Date:

Newton #5 (Net Force Problems)

Remember, all problems must include:

(1) A Picture (Free-body diagram) *(2) Knowns/Unknowns* *(3) Equation with letters*
(4) Plug & Chug *(5) Answer with Units*

$F_{NET} = ma$ $F_{NET} = \pm F_1 \pm F_2 \pm \cdots$ $F_G = mg$ $g = 9.8\,\text{m/s}^2$

1. Neal is stealing a refrigerator (173 kg) from the bank. If the force of friction on the refrigerator is 254 N, what force must he apply to have an acceleration of 1.27 m/s^2?

2. A skydiver (65 kg) deploys her parachute. How much force does the parachute exert on the skydiver if her acceleration downwards is only 1.2 m/s^2?

3. A giant Snorlax is in your way and your PokeFlute is broken. You need to pull it with a rope. If you apply a force of 520 N and there is 510 N of friction, what is the acceleration of the Snorlax? (According to the PokeDex, the average Snorlax's mass is about 459 kg.)