Name: Number: Date:

Newton #4 (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. You and a friend are able to use a rope to pull a giant cement statue across the ground with an acceleration of 0.07 m/s^2. If you apply a force of 500 N, your friend applies a force of 480 N, and the force of friction on the block is 300 N, what is the mass of the statue?

2. Bobby is lifting buckets of water straight up out of a well using a rope. If he applies a force of 50 N to a bucket with a mass of 3.2 kg, what is the acceleration of the bucket?

3. A vanilla coke with a mass of 0.371 kg is sitting at rest on a table. What is the normal force acting on the can?