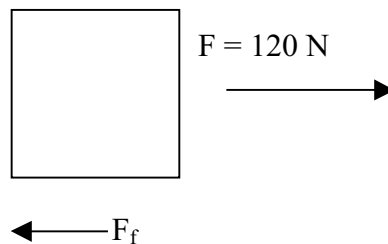


Newton's Second Law

Name: _____

1. A rope is being pulled on in a tug of war. If the left side pulls with 30 N of force and the right side pulls with 23 N of force, what will the net force be? Which direction will the rope travel in?
2. A box is pushed across the floor with a force of 25 newtons. If the frictional force is 5 newtons and the mass of the box is 3.5 kg, what acceleration will be produced?
3. A woman is driving along a road at 20 m/s in a 2000 kg car when she spots a deer in front of her and slams on her brakes. If the force provided by the brakes is 860 N and the force of friction is 55 N, what will be her deceleration?
 - a. If the deer is 200 m in front of her, will she stop before she hits the deer?
4. The laundry basket below is pushed on the floor. What is the frictional force acting on the basket if the acceleration of the basket is 3.2 m/s^2 ?

$m = 2.5 \text{ Kg.}$



5. Rolling friction on a can is 1.3 N. If the mass of the can is .45 kg, What force is needed to produce an acceleration of 3.2 m/s^2 ?
6. A skydiver weighs 145 pounds. What must the force of air resistance be to make his acceleration zero?

b. Describe his state of motion at this point.