1. A barrel is hung with two ropes as shown below. Find the force each rope puts on the barrel. The barrel has a mass of 50 kg. Solve for the tension in each rope.

300

450

**Qualitative Representation**

**Variables and Equations**

**Solution**

**Reasonability check**

1. A person is pulling a 5kg box at an angle 30° above the horizontal. The box accelerates in the horizontal direction at 1.7 m/s2. If there is no friction, solve for the tension in the rope. Then solve for the normal force.

**Qualitative Representation**

**Variables and Equations**

**Solution**

**Reasonability check**