Simple Friction

1. A 60kg box is pushed at 180N and accelerates at 1m/s2. Find the coefficient of kinetic friction of the floor. [μk=0.2]
2. A box is pushed at 100N across a floor where μk=0.35. The box travels at a constant speed. Find the mass of the box. [m=29.15kg]
3. A 45kg box is pulled across a floor where μk=0.31 and accelerates at 1.7m/s2. Find the force applied to the box. [Fapp= 213.12N]
4. A box mass 16kg is pushed at 60N across the floor and accelerates at 0.75m/s2. Find the coefficient of kinetic friction of the floor. [μk=0.31]
5. A 30kg mass is pulled at 70N across a floor where μs=0.21 and μk­=0.14. Does the box move? With what acceleration? [yes, a=0.96m/s2]
6. A 16kg mass is pulled at 60N across a floor where μs=0.3 and μk=0.21. Does it move? With what acceleration? [yes, a=1.7m/s2]
7. A 50kg mass is pushed across a surfaces where μs=0.41 and μk=0.29 at 150N. Does it move? With what acceleration? [No, a=0m/s2]