

### Worksheet 5.3 - Force of Friction

- 1) A 7.6 kg object is resting on a horizontal surface. What is the normal force on the object?
- 2) A 7.6 kg object is pulled along a horizontal surface. If the coefficient of friction is 0.20, what is the force of friction?
- 3) A 137 N object is pulled along a horizontal surface. If the coefficient of friction is 0.11, what is the force of friction?
- 4) A 9.6 kg object is pulled along a horizontal surface. If the coefficient of friction is 0.11, what is the force of friction?
- 5) A 20.0 N object is pulled along a horizontal surface at a constant velocity by a 3.0 N force, what is the coefficient of friction?
- 6) A 16.2 kg object is pulled along a frictionless surface by an applied force of 10.2 N, what is the normal force acting on it?
- 7) A 6.2 kg object is pulled along a horizontal surface by a force of 22.0 N. If its acceleration is  $1.1 \text{ m/s}^2$ , what is the coefficient of friction between the two surfaces?
- 8) A 1250 kg car traveling at 60.0 km/h comes to a sudden stop in 35 m. What is the coefficient of friction acting on the brakes?
- 9) A 950 kg car traveling at a constant velocity of 28 m/s, has a coefficient of friction of 0.125 acting on its axle. How much force is required by the engine to maintain its speed?
- 10) A 1425 kg dragster exerts 13900 N of force and accelerates from 0 to 100.0 km/h in 3.25 s. What is the coefficient of friction acting on the car?