Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Physics 11

**Worksheet 7.5**

**Power**

1. A 45.0 kg student runs up the incline shown. If the power output of the student is 1.5 kW, how long does it take the student to run the 9.0 m along the incline?



1. A student lifts a 20 kg object vertically 2.5 m in 2 s. Calculate the power output of the student.
2. A 2 kg object is accelerated uniformly from rest to 3 m/s while moving 1.7 m across a level frictionless surface. Calculate the power output.
3. An 850 kg elevator is pulled up 3.2 m at a constant velocity of 1.4 m/s. Calculate the power output of the motor.

Answers: 1) 1.8 s 2) 245 W 3) 7.94 W 4) 11,662 W