**Unit 5 - Quiz 2**

**Finding Individual Forces**

1. In the movie *Speed*, the villain initially blows up the cable holding an elevator. Once the cables are no longer holding up the elevator, the emergency brakes engage. Suppose in that scenario, the mass of the elevator and passengers was 1500 kg, and the emergency brakes provide a total resisting force of 9000 N.
2. Draw a force diagram for the elevator.

1. Determine the acceleration of the elevator. Be sure to show work.
2. A curling stone (18kg) moving at 5 m/s stops after sliding 28 meters. How much is the average force of friction on the stone?

1. It is said that ‘sweeping’ the ice in front of the stone can carry it further down the ice. If the sweeping reduces the friction by 10%, how much further will the stone go if the stone is swept the entire distance?