In your FBDs include coordinate systems (different ones for each are okay).

1. Draw a FBD for the cart.

2. Draw a FBD for the hanging mass m.

3. Draw a FBD for the cart and the hanging mass together.
A cart is given an initial velocity of 2m/s uphill on a tilted track (15 degree slope). Include friction $\vec{f}$. The friction is actually rolling friction, not static or kinetic. Use simply an $\vec{f}$ without a subscript.

4. Draw a FBD for the cart on its way uphill.

5. Draw a FBD for the cart on its way downhill.

Questions:

If there were no friction the magnitude of the acceleration uphill should be less than/equal to/greater than the acceleration downhill.

If there is friction, the magnitude of the acceleration uphill should be less than/equal to/greater than the acceleration downhill.