XA

Boy

S

x

U

B

A

A boy of mass m is standing initially at rest relative to the moving walkway, which has a constant horizontal speed U. He decides to accelerate his progress and starts to walk from point A with a constantly increasing speed and reaches point B with a speed of (Xdot) = v relative to the walkway.

During his acceleration he generates an average horizontal force F between his shoes and the walkway.

1. Write the work - energy equations for his absolute and relative motions.
2. Explain the meaning of the term: mUv