COM and Momentum

1. A **64 kg hunter** gets a rope around a **320 kg polar bear**. They are stationary, 20 m apart, on frictionless level ice. When the hunter pulls the polar bear to him, the polar bear will move:

Possible answers A) 1.0m B) 3.3m C) 10.2m D) 12.5 m E) 16.7m

2. Hockey player 1 (M_1 = 100 kg) skates right at 10 m•s^{-1} collides with two hockey players: player 2 (M_2 = 70 kg) skating left at 5 m•s^{-1}; player 3 (M_3 = 65 kg) skating left at 10 m•s^{-1}. If they stick together after the collision, what is their collective velocity (speed and direction)?