Question Number	Answer		Mark
16(a)	Sum of momenta before (collision) = sum of momenta after (collision) **Or** Total momentum before (a collision) = total momentum after (a collision) **Or** Total momentum remains constant **Or** The momentum of a system remains constant	**(1)**	
	Provided no external/unbalanced/resultant force acts (on the system) **Or** in a closed/isolated system	**(1)**	**2**
16(b)	Use of $p = m v$	**(1)**	
	Momentum before collision = 810 N s **and** after collision = 780 N s **Or** Expected velocity = 6.5 m s^{-1}	**(1)**	
	Correct conclusion based on comparison of candidate's momenta/speeds	**(1)**	**3**
	Example of calculation Momentum before collision: 65 kg × 5.5 m s^{-1} + 60 kg × 7.5 m s^{-1} = 807.5 N s Momentum after collision: (65 + 60) kg × 6.2 m s^{-1} = 775.0 N s 775 ≠ 808 ∴ momentum not conserved		
16(c)	Forces acted between skaters (during the collision) **Or** External forces [accept friction (between skates and ice)] act on the skaters (during the collision)	**(1)**	
	Work done (by forces) during the collision was not recovered **Or** Work done (by forces) during the collision was dissipated **Or** Work done (by forces) transfers (kinetic) energy to thermal energy [accept "heat"]	**(1)**	**2**
	Total for question 16		**7**