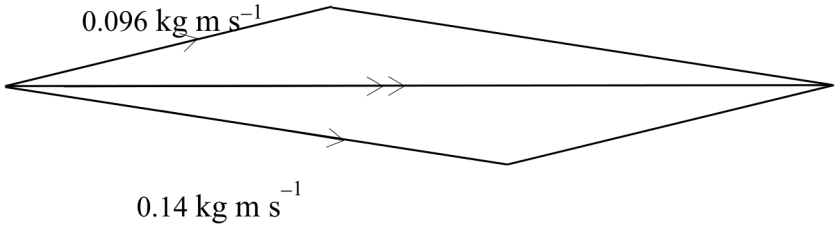
Question Number	Answer	Mark
15(a)	• Construction of correct vector diagram (parallelogram or triangle) with all 3 directions and 0.096 (kg m s^{-1}) and 0.14(kg m s^{-1}) labelled (1) • Momenta correctly scaled (ratio of lengths 0.14 to 0.096 rounds to between 1.40 and 1.50) (1) • Horizontal resultant (to within a slope of 1 small square) (1) • Total momentum = 0.22 to 0.24 (kg m s^{-1}) (1) (Do not award MP4 if this value has been obtained by calculation or from an incorrect diagram)  	**4**
15(b)	• The sum/total momentum before a collision is equal to the sum/total momentum after a collision (1) • Provided no external forces act (on the system) **Or** in a closed system (1)	**2**
15(c)	• Use of $p = mv$ (1) • $v = 1.9$ m s^{-1} (1) ($v = 1.7$ m s^{-1} using show that value and allow ecf from (a), v = 2.0 m s^{-1} if 0.236 kg m s^{-1} used) Example of calculation 0.23 kg m s^{-1} = 0.12 kg × v $v = 1.92$ m s^{-1}	**2**
	Total for question 15	**8**