Question number	Answer	Notes	Marks
5 (a) (i)	momentum = mass × velocity;	allow symbols and rearrangements e.g. p = m × v	1
(ii)	substitution into correct equation; evaluation; e.g. (momentum =) 0.23 × 13 = 3.0 (kg m/s)	 allow 3, 2.99	2
(b)	explanation in terms of conservation of momentum OR Newton's third law **conservation of momentum** - any 3 of: MP1. mention of conservation of momentum; MP2. momentum of snowball **and** skater; MP3. (are) equal and opposite; MP4. because momentum initially zero; OR **Newton's third law** - any 3 of: MP1. mention of {action and reaction / Newton III law}; MP2. forces on skater **and** snowball; MP3. (are) equal and opposite; MP4. idea that (magnitude of) rate of change of momentum is same for both forces;	 allow 'her' or similar to mean the skater allow e.g. -3.0 (kg m/s) allow 'her' or similar to mean the skater condone 'push' for force **if no other mark awarded**, allow 'because there is no / little friction' for 1 mark	3