Question number			Answer	Notes	Marks
5	(a)		any attempt at finding the area/ "area = distance" stated; area of triangle = ½ x 4.3 x 0.2 (= 0.43 m); area of rectangle = 4.3 x 0.2 (= 0.86 m); distance = 1.29 (m) ;	accept area of trapezium = ½ x 4.3 x (0.2 + 0.4) for MP2 and MP3. count squares; area of 1 square = 0.001 (m); distance = 1.29 (m)	4

	(b)	(i)	idea that acceleration = gradient;
			gradient = (-)4.3 / 0.05;
			acceleration = (-) 86 (m/s^2);
				-1 for POT error	3

		(ii)	(resultant) force = mass x acceleration / F = ma		1
		(iii)	substitution; evaluation; eg F = 0.13 x 86 F = 11 (N)	allow ECF from (i) ignore sign 11.18, 11.2	2
	(c)		increases time of collision; any reference to shallower gradient on graph; so acceleration will be smaller (in magnitude);		3

(Total for Question 5 = 13 marks)