

Question number	Answer	Notes	Marks
4 (a)	(i) voltage = current \times resistance;	allow standard symbols and rearrangements e.g. $V = I \times R$ ignore c, C for current	1
	(ii) conversion of mA to A; substitution; evaluation; e.g. $83 \div 1000 = 0.083$ $V = 0.083 \times 17$ (V =) 1.4 (V)	1400, 1410, 1411 (V) scores 2 marks allow 1.41, 1.411 (V)	3
	(iii) 1.4 (V)	allow ecf from (ii) allow 1.41, 1.414 1.4136 (V) do not penalise not converting mA to A if already penalised in (ii)	1
	(iv) evidence of addition of the two currents; 311 mA;	accept 0.311 A	2
	(b) any three from: MP1. current decreases; MP2. (total) resistance increases; MP3. idea that total voltage is the same; MP4. reference to $V=IR$;	allow idea that each resistor gets a lower voltage (from cell)	3

Total for Question 4 = 10 marks