

Question number	Answer	Notes	Marks
6 (a)	idea that background activity should be subtracted (from each reading);		1
(b)	time taken; and either for amount of (radioactive) nuclei / atoms / isotope to halve; OR for (radio)activity to halve	allow "how long it takes" allow <ul style="list-style-type: none"> decay by half decay to half ignore particles / molecules, "breakdown", "reactivity" reject if implies a single nucleus/atom	2
(c) (i)	evidence of use of graph; 56 ± 3 (s);	e.g. lines to two correct points on graph or appropriate subtraction shown in working	2
(ii)	any 1 from: MP1. idea of {more accurate / smoother} curve; MP2. idea that activity changes quickly; MP3. idea that decay takes very little time;	allow more points to plot on graph decays quickly (sample has) short half life	1

Total 6 marks