

Question number	Answer	Notes	Marks
8 (a)	<p>any FIVE from:</p> <p>MP1 use a balance (to measure the mass);</p> <p>MP2 mention a displacement method;</p> <p>MP3 measure the mass first;</p> <p>MP4 (because) a wet rock weighs more;</p> <p>MP5 use of eureka/displacement can or measuring cylinder;</p> <p>MP6 mention of eye-level or parallax avoidance;</p> <p>MP7 make sure rock completely submerged;</p> <p>MP8 make sure no water splashes out/put rock in gently;</p>	<p>ignore</p> <ul style="list-style-type: none"> • geometry equations • use of a ruler to measure rock • density = mass / volume <p>Can be implied from order of response.</p> <p>explicit mention only</p>	5
(b) (i)	density = mass / volume;	accept correct rearrangements accept symbols i.e. ρ , m/M , v/V	1
(ii)	<p>substitution;</p> <p>evaluation;</p> <p>answer to 2 sf;</p> <p>e.g. density = $32/12$ density = $2.66... \text{ g/cm}^3$ density = 2.7 g/cm^3 to 2 sf</p>	2 sf marked independently	3
(iii)	<p>quartz;</p> <p>as the density of rock X is the same as the density of quartz;</p>		2

Total for Question 8 = 11 marks