01. 0620_m18_ms_42 Q: 3

(a)(i)	M1 calcium oxide M2 CaO	**2**
(a)(ii)	(step) **3**	**1**
(a)(iii)	thermal decomposition	**1**
(a)(iv)	heating	**1**
(a)(v)	$Ca(OH)_2 + CO_2 \rightarrow CaCO_3 + H_2O$	**1**
(a)(vi)	M1 CO_2 is acidic M2 $Ca(OH)_2$ is a base / alkali	**2**
(b)	$MgCO_3 + 2HNO_3 \rightarrow Mg(NO_3)_2 + H_2O + CO_2$ M1 $Mg(NO_3)_2$ M2 rest of equation	**2**

(c)		Mg	Si	O	**2**
	M1	2.73 / 24	1.58 / 28	3.60 / 16	
	OR	0.11375	0.0564	0.23(0)	
	M2	0.0.11375 / .0564	0.0564 / .0564	0.230 / .0564	leading to Mg_2SiO_4