

Question		n	Answer	Marks	AO	Guidance	
9	(c)		$\frac{dy}{dt} = 12 - 6\sqrt{x}$ oe	<b>B1</b>	<b>3.1</b> a	allow one coefficient error	Correct answer with no
			dx				working for M and A
			dy				marks gives
			their $\frac{d}{dx} = 0$	M1	2.1	Must be two terms	(4,16) gives M1M1A1A1
							x=4 only gives
			$\sqrt{x} = 2$	M1	1.1	rearrange equation to make $\sqrt{x}$ or x	M1M1A1A0
						the subject	
			x = 4	A1	1.1	www. A0 if more than one value of x	
			(4, 16)	A1	3.2a	www. Must have brackets	
				[5]			
9	( <b>d</b> )		15	<b>B</b> 1	1.1	correct shape of curve	
			10	<b>B1</b>	1.1	curve passes through $(4,16)$ and $(9,0)$	<b>FT</b> their stationary point
			s			and touches (condone passes through )	
						(0,0); may be identified on or adjacent	
			-\$ 0 5 10 15			to graph	
				<b>B1</b>	1.1	curve in 1 <sup>st</sup> and 4 <sup>th</sup> quadrants only	
						with correct shape, No points in 2 <sup>nd</sup> or	
				[3]		3 <sup>rd</sup> quadrant	