Topic Test 1 Mark Scheme
Pre-calculus and area under a curve - Higher

Q	Answer	Mark	Comments
1(a)	40	B1	
1(b)	80	B1	
1(c)	24	B1	

Q	Answer	Mark	Comments
2	Any area calculated ie $0.5 \times 25 \div 2$ or 0.75×25 or $0.75 \times 25 \div 2$	M1	
	Total area calculated, eg $0.5 \times 25 \div 2 + 0.75 \times 25 + 0.75 \times 25 \div 2$ or $0.5 \times (2 + 0.75) \times 25$	M1dep	
	34.375	A1	

Q	Answer	Mark	Comments
3	$0.5 \times v$ or $3 \times v$ or $1 \times v$ or $0.5 \times (6 + 3) \times v$	M1	
	$4.5v$ ($\times 60$)	A1	
	$4.5v = 7.5 \times 60$	M1	
	100	A1	

Q	Answer	Mark	Comments
4(a)	7	B1	
4(b)	Attempt to calculate area under graph	M1	
	Clear division of area into triangles, rectangles or trapezia, with correct values in formulae for each diferent area	M1dep	
	[35, 40]	A1	
4(c)	m/s^2 or ms^{-2}	B1	
4(d)	Tangent drawn at t = 3 or chord drawn, parallel to tangent.	M1	
	y value ÷ x value for any triangle drawn or values from chord.	M1dep	
	[1.5, 3]	A1	

Q	Answer	Mark	Comments
5(a)	B	B1	
5(b)	C	B1	