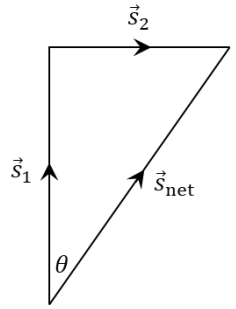
4	(a)	$\vec{s}_s = \vec{s}sin\theta$	
		$\vec{s}_s =$ 1890 x $sin25$	1
		$\vec{s}_s =$ 798.8 km	1
	(b)	$\vec{s}_w = \vec{s}cos\theta$	
		$\vec{s}_w =$ 1890 x $cos25$	1
		$\vec{s}_w =$ 1712.9 km	1
5			
		Vector diagram is labelled	1
		Length of each vector reflects its magnitude	1
		$\vec{s}_{net} = \sqrt{\vec{s}_1{}^2 + \vec{s}_2{}^2}$	
		$\vec{s}_{net} = \sqrt{50^2 + 35^2}$	1
		$\vec{s}_{net} =$ 61 km	1
		$tan\theta = \frac{\vec{s}_2}{\vec{s}_1}$	
		$\theta = tan^{-1}\left(\frac{35}{50}\right)$	1
		$\theta =$ 35°, east of north	1
6	(a)	$\vec{v}_H = \vec{v}cos\theta$	
		$\vec{v}_H =$ 75 x $cos12$	1
		$\vec{v}_H =$ 73.4 m s^{-1}	1
	(b)	$\vec{v}_V = \vec{v}sin\theta$	
		$\vec{v}_V =$ 75 x $sin12$	1
		$\vec{v}_V =$ 15.6 m s^{-1}	1
	(c)	$\vec{v} = \sqrt{\vec{v}_H{}^2 + \vec{v}_V{}^2}$	
		$\vec{v} = \sqrt{73.4^2 + 8^2}$	1
		$\vec{v} =$ 73.8 m s^{-1}	1
		$tan\theta = \frac{\vec{v}_V}{v_H}$	
		$\theta = tan^{-1}\left(\frac{8}{73.4}\right)$	1
		$\theta =$ 6.2°, below the horizontal	1