Question number	Answer	Notes	Marks
4 (a)	(speed = 2πr/T is given) use of equation; final value; matching unit; e.g: Speed = (2 x π x 58 000 000) / (88 x 24 x 60 x 60) Speed = (2 x π x 58 000 000) / (88 x 24 x 60 x 60) = 47.9 km/s	alternatives - 88 days, 2112 hours, 126720 minutes, 7603200 seconds 47930 m/s, 172439596 m/hr, 172548.596 km/hr, 4138560 km/day	3
(b) (i)	Gravitational;	ALLOW 'gravity'	1
(ii)	Ellipse added to diagram with Sun nearer one focus of the ellipse;	DO NOT ALLOW symmetrical ellipse with Sun at the centre ALLOW incomplete ellipse (i.e. path around the Sun shown with orbit extending beyond the diagram space)	1
(iii)	Point closest Sun labelled X / ecf from the ellipse drawn	Should ideally extend from outside Mercury orbit to inside Mercury orbit ALLOW a tolerance on the position of X in line with the drawing skill	1
(iv)	Close / closest / closer to Sun; Gravitational force strongest;	ALLOW '(force of) gravity greater' ALLOW Answer based on gpe/ke	1 1
		Total	**8**