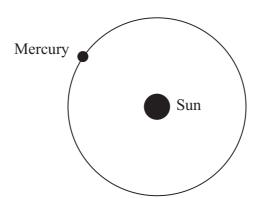
4 The planet Mercury orbits the Sun.



(a) Mercury takes 88 days to orbit the Sun.

The average radius of the orbit is 58 million km.

Calculate the average orbital speed of Mercury.

Give the unit.

(3)

Average orbital speed = \_\_\_\_\_ Unit \_\_\_\_



e to show the orbit of a typical comet.  (1)  ges during its orbit.  n, label with the letter <b>X</b> the position where the speed.	(i)		
ges during its orbit.  n, label with the letter X the position where the speed.  (1)  els fastest at point X.  (2)		Name the force that causes comets and planets to orbit the Sun.	(1)
n, label with the letter <b>X</b> the position where the speed.  (1)  els fastest at point <b>X</b> .  (2)	(ii)	Add to the diagram opposite to show the orbit of a typical comet.	(1)
speed. (1) rels fastest at point X. (2)	(iii)	The speed of a comet changes during its orbit.	
rels fastest at point X. (2)		On the orbit you have drawn, label with the letter <b>X</b> the position where the comet travels at its <b>fastest</b> speed.	
		1	(1)
(Total for Question 4 = 8 marks)	(iv)	Explain why the comet travels fastest at point $X$ .	(2)
(Total for Question 4 = 8 marks)			
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