

GCSE Physics A (Gateway)
J249/04 Physics A P5-P8 and P9 (Higher Tier)

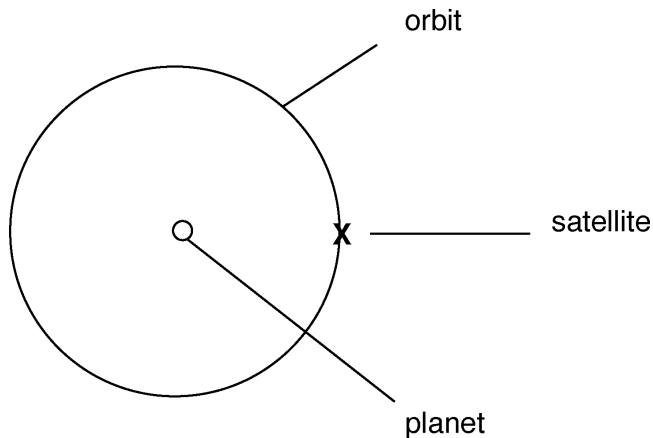
Question Set 21

21 (a) State **two** features of a satellite in a **polar orbit**?

Suggest a use for a satellite in a polar orbit.

[3]

(b) An artificial satellite (X) is kept in a stable circular orbit around a planet by a centripetal force caused by gravity.



(i) Explain how the velocity of a satellite is constantly changing whilst its speed remains the same when it is in orbit.

[2]

(ii) The satellite is remotely controlled from Earth.

The scientists want the satellite to move slower.

What effect will this change in speed have on the height of its orbit?

Explain your answer.

[2]

Total Marks for Question Set 21: 7

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