

Gravitation

Question Paper

Level	Pre U
Subject	Physics
Exam Board	Cambridge International Examinations
Topic	Gravitation
Booklet	Question Paper

Time Allowed: 3 minutes

Score: /2

Percentage: /100

Grade Boundaries:

1 A satellite is in a circular orbit of radius r around the Earth.

The orbital period of the satellite is T .



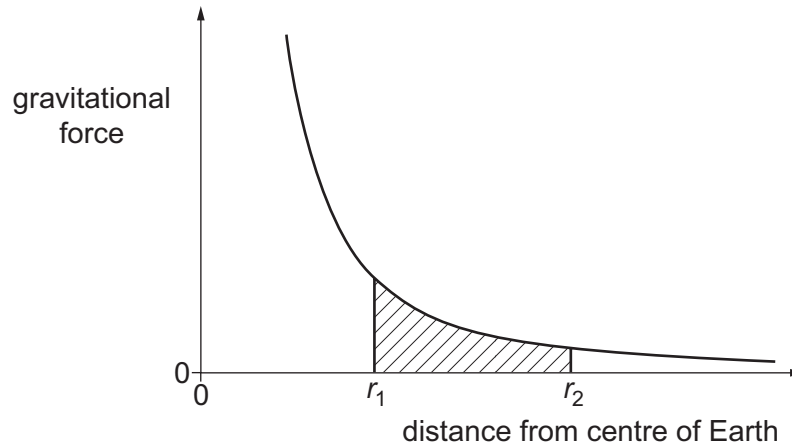
A second satellite, in a different circular orbit, has an orbital period $64T$.

What is the radius of the orbit of the second satellite?

- A $8r$
- B $16r$
- C $64r$
- D $512r$

Space for working

- 2 A satellite above the Earth in a circular orbit of radius r_1 is moved to a higher circular orbit of radius r_2 . The gravitational force-distance graph is shown for the satellite.



What does the shaded area on the graph represent?

- A** the change in gravitational potential energy of the satellite
- B** the change in kinetic energy of the satellite
- C** the final gravitational potential energy of the satellite
- D** the final kinetic energy of the satellite

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