

The table shows some information about the planets Venus and Mercury.

	Average Surface Temperature (°C)	Atmospheric Composition	Mean Distance from the Sun (millions of km)	Time to Revolve Around the Sun (Number of Days)
Venus	470	Mostly Carbon Dioxide	108	225
Mercury	300	Trace amounts of gases	58	88

Which of the following best explains why the surface temperature of Venus is higher than that of Mercury?

- (A) There is less absorption of sunlight on Mercury because of the lack of atmospheric gases.
- (B) The high percentage of carbon dioxide in the atmosphere of Venus causes a greenhouse effect.
- (C) The longer time for Venus to revolve around the Sun allows it to absorb more heat from the Sun.
- (D) The Sun's rays are less direct on Mercury because it is closer to the Sun.

TIMSS 2003

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Content Domain

Earth Science

Main Topic

Earth in the solar system and universe

Cognitive Domain

Reasoning and Analysis

Key

B