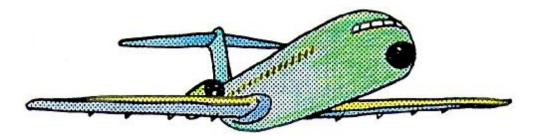
## Nonether Extension

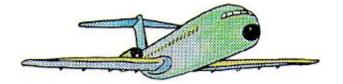


The air temperature at an altitude of 10 kilometers is a chilling -35°C. Cabin temperatures in airplanes flying at this altitude are comfortable because of air conditioners rather than heaters. Why?



CONCEPTUAL Physics

## Nontend Explanation



The air temperature at an altitude of 10 kilometers is a chilling -35°C. Cabin temperatures in airplanes flying at this altitude are comfortable because of air conditioners rather than heaters.

Why?

## Answer:

CONCEPTUAL Physics

Airliners have pressurized cabins. The process of stopping and compressing outside air to near-sealevel pressures would normally heat the air to a roasting 55°C (130°F).

So air conditioners must be used to extract heat from the pressurized air.

