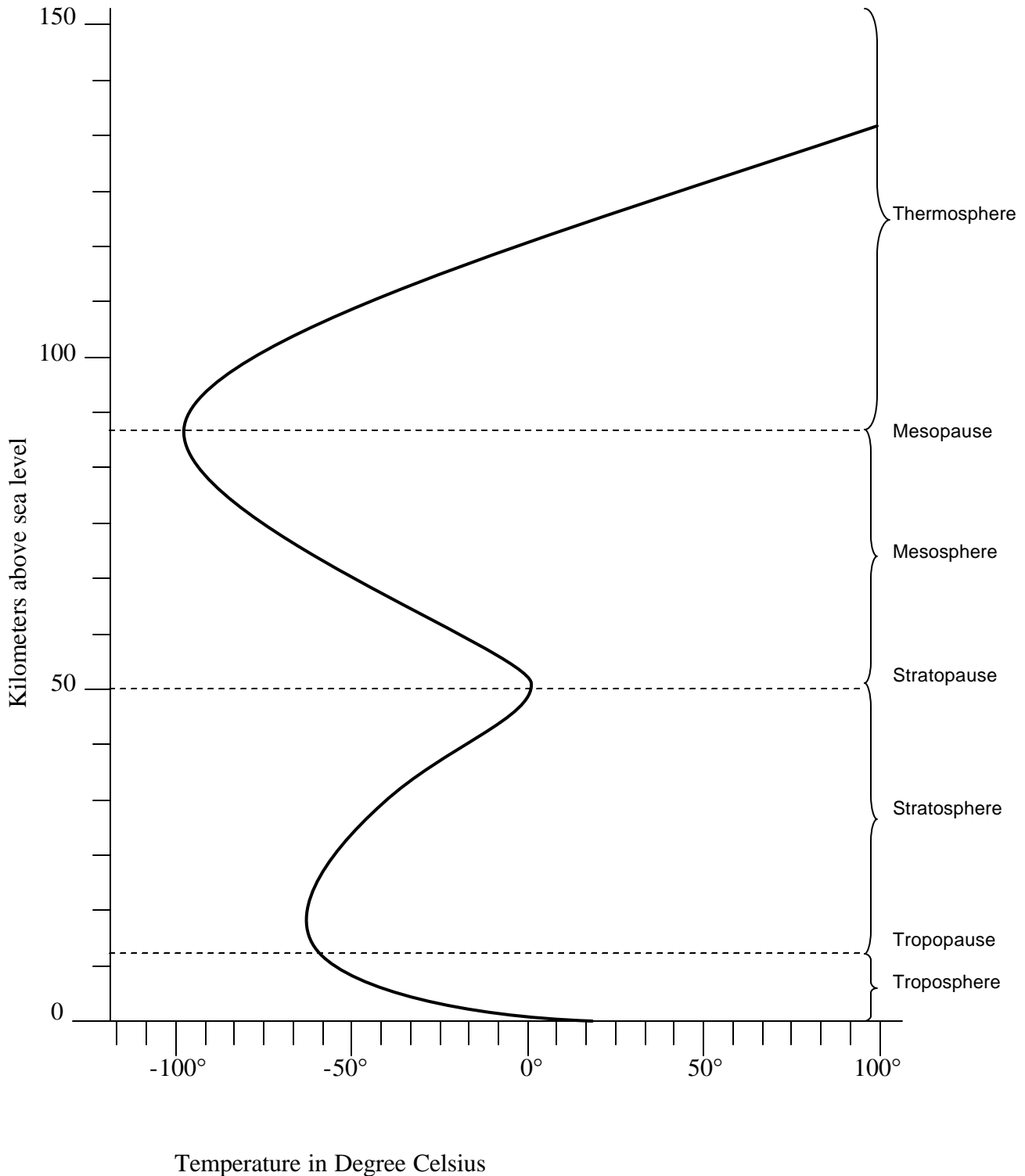


## Examining Temperature Patterns in the Atmosphere

If it were possible to climb up a ladder through the atmosphere and measure the air temperature as you traveled, you would discover the pattern of atmospheric temperatures shown in the graph. This graph shows how the atmosphere is divided into four distinct temperature zones that are separated from one another by a series of boundaries referred to as "pauses."



Refer to the graph to answer the following questions.

1. a. Which of the four temperature zones is the thinnest?

b. Approximately how thick is it?

2. How thick is the stratosphere?

3. How thick is the mesosphere?

4. Which temperature zone do we live in?

5. As you move upward through the troposphere, what happens to the temperature of the atmosphere?

6. a. What is the approximate temperature of the atmosphere at the stratopause?

b. What is the approximate temperature of the atmosphere at the Earth's surface (sea level)?

c. At what approximate height above sea level does the graph indicate the temperature of the atmosphere is the coldest?

7. In which temperature zones does the atmospheric temperature increase as the distance above sea level increases?

8. Describe the change that occurs in the pattern of atmospheric temperatures at the “pauses.”