

Practice

1. The highest surface temperature on any of the solar system's planets is found on Venus. Partly because of its nearness to the sun and partly because of the extreme pressure of its atmosphere, the average daytime temperature on Venus is 453°C . What is this temperature in degrees Fahrenheit and in kelvins?

2. In contrast to Venus, the coldest temperature yet measured on the surface of any body in the solar system is -235°C . This temperature was detected by *Voyager 2* as it passed by Neptune's largest moon, Triton. What is Triton's surface temperature in degrees Fahrenheit and in kelvins?

3. The warmest temperature in Antarctica was recorded at the Vanda Station on the Scott Coast. On January 5, 1974—early summer in the southern hemisphere—a high temperature of 15°C was reached. Express this temperature in degrees Fahrenheit and kelvins.

4. A recipe for bread states that the dough must bake for 40 minutes at a temperature of 190°C . The oven you are using has temperature markings on the dial that are in units of degrees Fahrenheit. At what Fahrenheit temperature must the bread be baked? What would this temperature be in kelvins?

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5. Hot water heaters often have warning labels indicating that injuries can result when the temperature of the water is above 125°F . What is this temperature in degrees Celsius and in kelvins?

6. Only three times in the history of weather monitoring in the United States have the national high and low temperatures for one day occurred in the same location. On November 11, 1911, in Oklahoma City, the low temperature was 17°F and the high temperature was 83°F , a difference of 66 Fahrenheit degrees. What were these high and low temperatures in degrees Celsius and kelvins?

7. Antifreeze is able to work because its freezing point is lower than that of water. Water and antifreeze combined together have an even lower freezing point. A mixture of two-thirds antifreeze and one-third water freezes at -83.9°F . What is this temperature in degrees Celsius and in kelvins?