

## Problem 1.4

Does it ever make sense to say that one object is “twice as hot” as another? Does it matter whether one is referring to Celsius or kelvin temperatures? Explain.

---

### Solution

It only makes sense to say that one object is “twice as hot” as another if it’s in reference to a particular absolute temperature scale, such as kelvin or Rankine. Just hearing that one object is “twice as hot” as another with no context, though, is meaningless because there’s more than one absolute temperature scale. When said in reference to the Fahrenheit or Celsius temperature scales, it’s also meaningless since the zero temperatures are arbitrary.