

Temperature Scales



Temperature is a measurement of heat. In USA, it is measured in Fahrenheit (°F). In other parts of the world, it is usually measured in Celsius (°C). In many scientific applications, it is also listed in Rankine (°R), and Kelvin. Use the following table for various temperature conversions.

Temperature Scale	Convert to by
Fahrenheit	$^{\circ}\text{F} = 1.8^{\circ}\text{C} + 32^{\circ}$
Celsius	$^{\circ}\text{C} = 5/9(^{\circ}\text{F} - 32^{\circ})$
Rankine	$^{\circ}\text{R} = 1.8\text{K} + 0.6^{\circ}$ $^{\circ}\text{R} = ^{\circ}\text{F} + 460^{\circ}$
Kelvin	$\text{K} = 5/9 (^{\circ}\text{R} - 0.6^{\circ})$ $\text{K} = ^{\circ}\text{C} + 273^{\circ}$
The Kelvin scale uses no ^o , symbol.	

Examples:

What is 100°C in °F?

$$^{\circ}\text{F} = 1.8^{\circ}\text{C} + 32^{\circ} = 1.8 \times 100 + 32 = \mathbf{212^{\circ}\text{F}}$$

What is 90°F in °C?

$$^{\circ}\text{C} = 5/9(^{\circ}\text{F} - 32^{\circ}) = 5/9(90 - 32) = 5/9(58) = \mathbf{32.22^{\circ}\text{C}}$$

Scottish engineer and physicist William John Macquorn Rankine