

# Temperature

Temperature scales: Fahrenheit, Celsius, Kelvin

Going between Fahrenheit ( $t_F$ ) and Celsius ( $t_C$ ):

$$t_F = 32 + \frac{9}{5}t_C$$

Going between Celsius and Kelvin ( $t_K$ ):

$$t_K = 273 + t_C$$

Absolute zero of temperature is at 0 K (or equivalently  $-273^\circ\text{C}$ )

# Homework 22

## Problem

A scientist studying volcanoes accidentally drops some of his instruments into lava. One of his instruments is made of silver while the other one is made of steel.

Volcanic lava at eruption has temperature around  $1200\text{ }^{\circ}\text{C}$ , steel melting point is  $2600\text{ }^{\circ}\text{F}$  while silver melting point is  $1230\text{ K}$  (Kelvins). Which of the instruments are going to melt in lava?

