

Many countries of the world use a Celsius thermometer to measure temperature. When we visit Canada or Mexico, we may need to convert their temperatures measured in degrees $^{\circ}\text{C}$ to ours measure in Fahrenheit degrees $^{\circ}\text{F}$.

1. Water boils at 100°C or 212°F . When the temperature is -40°C it is also -40°F . Use this data to make a table with the left column labeled $^{\circ}\text{C}$, and the right column labeled $^{\circ}\text{F}$.
2. Make a graph of Fahrenheit against Celsius, plot the points in the table and connect the points. Does Fahrenheit increase as Celsius increases? Does Celsius increase as Fahrenheit increases?
3. What is the temperature in Fahrenheit when the temperature is 20°C ?
4. When the temperature is 0°C Celsius, what is the Fahrenheit temperature?
5. What does the Celsius thermometer read if the Fahrenheit thermometer reads 140°F ?
6. If Centigrade increases by 1 degree, how much will the Fahrenheit temperature increase?
7. What is the Celsius to Fahrenheit ratio? Write it as a decimal and a fraction.
8. What is the Fahrenheit to Celsius ratio? Write it as a decimal and a fraction.
9. What formula, $F = f(C)$, will convert Celsius degrees to Fahrenheit degrees?
10. Where does the line cross the horizontal axis? What are the Celsius and Fahrenheit temperatures represented at this crossing?