

4.1 Temperature Conversions

Name: Key

- Canada uses the Celsius scale ($^{\circ}\text{C}$) of the SI
- Water freezes at 0 $^{\circ}\text{C}$ and boils at 100 $^{\circ}\text{C}$
- United States uses the Fahrenheit scale ($^{\circ}\text{F}$) of the imperial system
- Water freezes at 32 $^{\circ}\text{F}$ and boils at 212 $^{\circ}\text{F}$

$$C = \frac{5}{9} (F - 32)$$

$$F = \frac{9}{5} C + 32$$

Examples:

1. Convert the following temperature to degrees Fahrenheit.

i. 0°C

$$\begin{aligned} F &= \frac{9}{5} (0) + 32 \\ &= 0 + 32 \\ &= 32 \end{aligned}$$

ii. -43°F

$$\begin{aligned} C &= \frac{5}{9} (-43 - 32) \\ &= \frac{5}{9} (-75) \\ &= -42^{\circ}\text{C} \end{aligned}$$

Try it!

1. Convert the following temperatures.

a) 35°C

d) 0°F

b) -8°C

e) 2°F

c) -2°F

f) 165°C