Conversions

The following tables show the temperature conversion formulas:

To Celsius conversion formulas

Fahrenheit to Celsius	°C = (°F − 32) /1.8
Kelvin to Celsius	°C = K − 273.15
Rankine to Celsius	°C = (°R ÷ 1.8) – 273.15
Réaumur to Celsius	°C = 1.25 × °Ré
Rømer to Celsius	°C = (°Rø - 7.5) × 40/21
Delisle to Celsius	°C = 100 − °De × 2/3
Newton to Celsius	°C = °N × 100/33

Example: convert each of the following into Celsius scale: 33 ^{o}F, 44 ^{o}N, 17 ^{o}De, 122^{o}Re', 77°Rø , 420 ^{o}R

Solution: for 33 °F use table1

$$C = (F - 32)/1.8$$

so that

C=(33-32)/1.8=0.55 °

and so on for the other conversions

From Celsius conversion formulas

Celsius to Fahrenheit	°F = (°C × 1.8) + 32
Celsius to Kelvin	°K = °C + 273.15
Celsius to Rankine	°R = (°C + 273.15) × 1.8
Celsius to Réaumur	°Ré =(°C × 4)/5
Celsius to Rømer	°Rø = °C × 21/40+7.5
Celsius to Delisle	°De = (100 − °C) × 3/2
Celsius to Newton	°N = °C × 33/100

To Fahrenheit conversion formulas

Celsius to Fahrenheit	°F = (°C × 1.8) + 32
Kelvin to Fahrenheit	°F = (°K × 1.8) - 459.67
Rankine to Fahrenheit	°F = °R - 459.67
Réaumur to Fahrenheit	°F = (°Ré × 2.25)+ 32
Rømer to Fahrenheit	°F = (°Rø - 7.5) × 24/7 + 32
Delisle to Fahrenheit	°F = 121 − °De × 6/5
Newton to Fahrenheit	°F = °N × 60/11 + 32

From Fahrenheit conversion formulas

Fahrenheit to Celsius	°C = (°F − 32) /1.8
Fahrenheit to Kelvin	°K = (°F + 459.67) × 5/9
Fahrenheit to Rankine	°R = °F + 459.67
Fahrenheit to Réaumur	°Ré = (°F - 32) × 4/9
Fahrenheit to Rømer	°Rø = (°F − 32) × 7/24 + 7.5
Fahrenheit to Delisle	°De = (121 − °F) × 5/6
Fahrenheit to Newton	°N = (°F − 32) × 11/60

You can convert to any formula by using table1 as follows:

for example if you want to convert all formulas to Delisle you must use

$$C = 100 - De \times \frac{2}{3}$$

then convert it to:

$$De = (100 - C) \times \frac{3}{2}$$

Example: convert the following into Delisle formula:

41 °N, 17 °F, 12°Re’, 27°Rø , 40 °R

Using the same procedure, Convert each of the following into Fahrenheit formula:

11 °N, 17 °C, 122°Re', 217°Rø , 140 °R