

Answer on Question #72448, Chemistry / General Chemistry

At what temperature is the temperature in degrees fahrenheit equal to twice the temperature in degrees celsius?

Solution

The formula of conversion degrees Fahrenheit into degrees Celsius is:

$T_F = 1.8T_C + 32$, where T_F – temperature in degrees fahrenheit; T_C – temperature in degrees celsius

$T_F = 2 T_C$ – as given in the task

$$2T_C = 1.8 T_C + 32$$

$$0.2 T_C = 32$$

$$T_C = 160$$

$$T_F = 2 T_C$$

$$T_F = 320$$

Answer

$$\mathbf{160^{\circ}\text{C} = 320^{\circ}\text{F.}}$$