

Challenge

Temperatures Around the World

Temperature can be measured in degrees Fahrenheit ($^{\circ}\text{F}$) or degrees Celsius ($^{\circ}\text{C}$). Degrees Fahrenheit are customary units and degrees Celsius are metric units. You can use math to convert between the two measurements. In this case, we will ignore the remainders when calculating.

Convert 70°F to 21°C

1. subtract 32

$$\begin{array}{r} 70 \\ -32 \\ \hline 38 \end{array}$$

2. multiply by 5

$$\begin{array}{r} 38 = 30 + 8 \\ \times 5 = \quad + 5 \\ \hline 30 \times 5 = \quad 150 \\ 8 \times 5 = \quad +40 \\ \hline 190 \end{array}$$

3. divide by 9

$$\begin{array}{r} 21 \text{ R}1 \\ 9 \overline{)190} \\ \underline{18} \\ 10 \\ \underline{-9} \\ 1 \end{array}$$

Convert 21°C to 69°F

1. multiply by 9

$$\begin{array}{r} 21 = 20 + 1 \\ \times 9 = \quad +9 \\ \hline 20 \times 9 = \quad 180 \\ 1 \times 9 = \quad +9 \\ \hline 189 \end{array}$$

2. divide by 5

$$\begin{array}{r} 37 \text{ R}4 \\ 5 \overline{)189} \\ \underline{15} \\ 39 \\ \underline{-35} \\ 4 \end{array}$$

3. add 32

$$\begin{array}{r} 37 \\ +32 \\ \hline 69 \end{array}$$

Look at each location's average temperature. Convert the temperature to either Celsius or Fahrenheit.

- Vostok Station, Antarctica _____ $^{\circ}\text{C}$ = -68°F
- Death Valley, California 33°C = _____ $^{\circ}\text{F}$
- Moscow, Russia 4°C = _____ $^{\circ}\text{F}$
- Honolulu, Hawaii 25°C = _____ $^{\circ}\text{F}$
- North Pole, Greenland _____ $^{\circ}\text{C}$ = 0°F

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- Moscow, Russia $4^{\circ}\text{C} = \underline{39}^{\circ}\text{F}$
- Honolulu, Hawaii $25^{\circ}\text{C} = \underline{77}^{\circ}\text{F}$
- North Pole, Greenland $\underline{-17}^{\circ}\text{C} = 0^{\circ}\text{F}$