Temperature Conversion

How to Change Fahrenheit to Celsius

We convert ° F to °C by

Step 1-subtract 32

Step 2-multiply by 5

Step 3- then divide by 9

Solve.

a. **60° F = _____° C**

b. **32° F = _____° C**

c. **50°F = _____ ° C**

d. **86° F =_____ ° C**

Example:

80° F = **26.6 °C**

Step 1 80-32= **48**

Step 2 **48** x5 = **240**

Step 3 **240** ÷ 9= **26 r6**

If your answer has a remainder, turn your **answer** into a decimal number. The decimal point should come before the remainder number.

26r6 = **26.6**

How to Change Celsius to Fahrenheit

We convert °C to °F by

Step 1 -Multiply by 9

Step 2- divide by 5

Step 3- then add 32

Solve.

a. **0° C =_____ ° F**

b. **100° C =_____ ° F**

c. **5° C = _____ ° F**

d. **10° C = _____ ° F**

Example:

20° C = **68 °F**

Step 1 20x9= **180**

Step 2 **180** ÷5 = **36**

Step 3

$$\begin{array}{r} 36 \\ +\ 32 \\ \hline 68 \end{array}$$

Name: _____

Skill Sheet 25-A — Temperature Scales

Temperature, a measure of the average kinetic energy of the molecules of a substance, has an important role in our daily lives. Whether we are cooking dinner, dressing for school, or suffering from a cold, we often wish to know something about the temperature of our environment or some body of matter. To report values for temperature, the Fahrenheit and Celsius scales are commonly used by scientists and society. In this exercise, you will examine these scales and practice converting temperature values from one scale to the other.

1. Fahrenheit and Celsius

The Fahrenheit and Celsius temperature scales are the most commonly used scales for reporting temperature values. Scientists use the Celsius scale almost exclusively, as do many countries of the world. Some countries, such as the United States, still rely heavily on the Fahrenheit scale for reporting temperature information. When the meteorologist on television tells you the forecast for the week, the scale he is using for temperature is Fahrenheit. Your oven is calibrated in Fahrenheit values, as is the thermometer your doctor uses to assess your health. In the United States, we are comfortable with the Fahrenheit scale and design our appliances and tools using this system of measurement.

However, if you were in Europe, you would see temperatures given in degrees Celsius. Scientists use the Celsius scale for their experiments and report their results in degrees Celsius. Therefore, it may be necessary at some point in time to convert information reported in degrees Celsius to degrees Fahrenheit or vice versa. To accomplish this, we use conversion formulas.

2. Converting Fahrenheit values into Celsius

If you have been given temperature information in degrees Fahrenheit (°F) and need the values to be reported in degrees Celsius (°C), you would use the following formula:

$$°C = \frac{5}{9}(°F - 32)$$

Example:

What is the Celsius value for 65° Fahrenheit?

$$°C = \frac{5}{9}(65°F - 32)$$

$$°C = 18.3$$

YOU DO:

What is the Celsius value for the following?

1. **45° F** _____
2. **108° F** _____
3. **54 ° F** _____
4. **81° F** _____
5. **36° F** _____