BEDMAS

Brackets
Exponents.
Divide/ Multiply
Adding/ Subtracting

Oct 6-2:17 PM

Curriculum Outcome

M1 Demonstrate an understanding of the Système International (SI) by describing the relationships of the units for length, area, volume, capacity, mass and temperature.

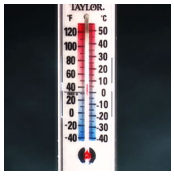
M2 Demonstrate an understanding of the Imperial system by: describing the relationships of the units for length, area, volume, capacity, mass and temperature.

Student Friendly: The relaonship between degrees Celsius and degrees Fahrenheit

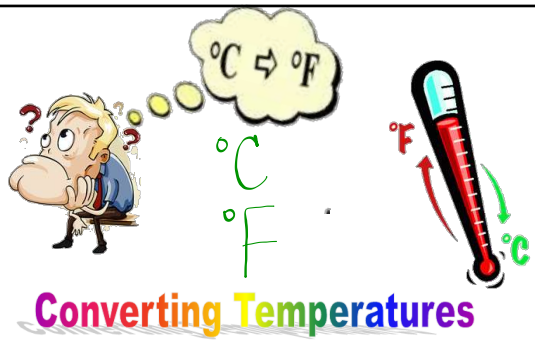
Sep 7-2:50 PM

Chapter 5: Mass, Temperature, and Volume

We will look at further conversions between the metric and imperial systems in this chapter and learn how to apply them to real life situations.



Oct 2-9:00 PM

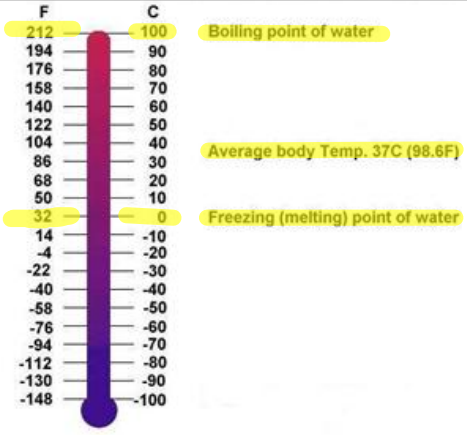


Nov 28-1:06 PM

Temperature

Have you ever noticed how cooking temperatures for most frozen meals are given in °F yet we measure the outside temperature in °C? How do we compare the temperatures in these two systems of measurement?

Oct 2-9:12 PM



Oct 2-9:42 PM

COMPARISONS...

- 100° Celsius is the same temperature as 212° Fahrenheit, and 0° Celsius is the same temperature as 32° Fahrenheit.
- Thus, there is a 100-degree difference between the freezing and boiling points on the Celsius scale, while on the Fahrenheit scale there is a 180-degree difference.
- Therefore, the relationship between the size of the degrees can be expressed as

$$\frac{C}{F} = \frac{100}{180} = \frac{5}{9}$$

This means that each degree Fahrenheit is $\frac{5}{9}$ of a degree Celsius.

- Since 0°C is equivalent to 32°F, we must subtract 32 from the Fahrenheit temperature before we multiply by $\frac{5}{9}$.
- Thus, the formula for converting degrees Fahrenheit to degrees Celsius is:

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

Sep 29-8:52 PM

Converting Fahrenheit to Celsius

F → C

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

Nov 28-1:11 PM

Convert -4°F to degrees Celsius.

$$C = \frac{5}{9}(F - 32)$$
$$= \frac{5(-4-32)}{9}$$
$$= \frac{5(-36)}{9} = \frac{-180}{9} = -20°C$$

Nov 28-1:19 PM

Convert 78°F to degrees Celsius.

$$C = \frac{5}{9}(F - 32)$$
$$= \frac{5}{9}(78-32)$$
$$= \frac{5}{9}(46)$$
$$= 25.5 \approx 26°C$$

Nov 28-1:25 PM

Converting Celsius to Fahrenheit

C → F

$$F = \left(\frac{9}{5}C\right) + 32$$

Nov 28-1:11 PM

Convert 58°C to degrees Fahrenheit.

$$F = \frac{9}{5}C + 32$$
$$F = \frac{9C}{5} + 32$$
$$F = \frac{9(58)}{5} + 32$$
$$F = \frac{522}{5} + 32$$
$$F = 104.4 + 32$$
$$F = 136.4 \approx 136°F$$

Nov 28-1:31 PM

Convert 14°C to degrees Fahrenheit.

$F = 9/5\ C + 32$

$= \frac{9(14)}{5} + 32$

$= \frac{126}{5} + 32$

$= 25.2 + 32 \simeq 57°F$

Nov 28-1:31 PM

While travelling in the US, Jennifer and Richard are concerned because their daughter Isabella has a temperature of 39°C, so they take her to a medical clinic. The nurse takes Isabella's temperature on the Fahrenheit scale. What will Isabella's temperature be in degress Fahrenheit?

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

$= \frac{9(39)}{5} + 32$

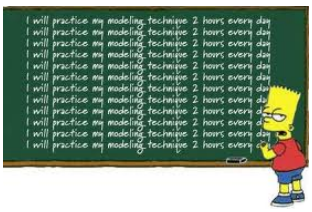
$= \frac{351}{5} + 32$

$= 70.2 + 32 \simeq 102°F$

Nov 28-1:59 PM

HOMEWORK...

5.1 Worksheet - Temperature Conversions.docx



Oct 3-10:49 AM

Temp. Conv. 4.1

1) a, b, c

2) a, b

3, 4, 5

Build Your Skills

All

Oct 6-3:09 PM

Temperature Conversions 4.1

1) Convert following temperature to degree Fahrenheit

a. 35 °C b) – 8°C c) 165°C d) 21°C e. -40°C

2) Convert the following temperature to degrees Celsius

a. -20°F b) 80°F c) 375°F d) 2°F e. 0°F

3) Which is hoer, a blow torch flame at 1300 °C or a candle flam at 1830°F? By how much hoer is the flame than the other.

4) When Harry mixes different materials to pave a road, he knows that they must be kept at the following temperatures in degrees Fahrenheit. Calculate the temperat

a. Bituminous material must be between 200°F and 260°F

5) When the human body reaches a temperature of 41°F, it is said to be in a state of "medical emergency". What is this temperature in degrees Celsius?

Mar 9-4:41 PM

Attachments

Worksheet - EXTRA Practice Converting Temperatures.docx

5.1 Worksheet - Temperature Conversions.docx