

Name \_\_\_\_\_ School Team \_\_\_\_\_

Event 2: Problem Solving (with calculators)

7th/8th grade Math Meet '08

There are many different scales with which we measure temperature. Here are formulas to convert from Celsius to other temperature scales:

$$\text{Celsius to Fahrenheit: } F = (9/5)C + 32$$

$$\text{Celsius to Kelvin: } K = C + 273.15$$

$$\text{Celsius to Rømer: } R\text{\o} = (21/40)C + 7.5$$

$$\text{Celsius to Delisle: } D\text{e} = (3/2)(100 - C)$$

For example, water freezes at the following temperatures for each scale:

Celsius	Fahrenheit	Kelvin	Rømer	Delisle
0° C	32° F	273.15° K	7.5° Rø	150° De

Use these conversion formulas to answer the following questions.

Part 1: Gosh it's hot/cold! (2 pts. each)

For each of the following questions, fill in the missing temperatures on the chart.

Lowest recorded naturally occurring temperature  
(Vostok, Antarctica, July 21, 1983):

Celsius	Fahrenheit	Kelvin	Rømer	Delisle
-89° C	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Highest recorded naturally occurring temperature  
(Al'Aziziyah, Libya, September 13, 1922):

Celsius	Fahrenheit	Kelvin	Rømer	Delisle
58° C	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

