Name Answer Key Hour _____

Temperature and its Measurement

(Honors Chemistry)

Temperature (which measures average kinetic energy of the molecules) can be measured using three common scales: Celsius, Kelvin, and Fahrenheit. We use the following formulas to convert from one scale to the other. Celsius is the scale most desirable for laboratory work. Kelvin represents the absolute scale. Fahrenheit is the old English scale which is never used in the laboratory.

°F = (1.8 x °C) + 32	**°C = (°F – 32) x 0.56**
K = °C + 273	**°C = Kelvin - 273**

Complete the following table. Round your measurements to one decimal place.

	°C	K	°F
1.	0 °C	273.0 K	32 °F
2.	100 °C	373 K	212 °F
3.	177 °C	450 K	350.6 °F
4.	37.3 °C	310.3 K	98.6 °F
5.	-273 °C	0 K	-459.4 °F
6.	21 °C	294 K	69.8 °F
7.	25.2 °C	298.2 K	77 °F
8.	-48 °C	225 K	-54.4 °F
9.	-40 °C	233 K	-40 °F
10.	-56.2 °C	216.8 K	-68.4 °F

	°C	K	°F
11.	60 °C	333 K	140 °F
12.	22.4 °C	295.4 K	72 °F
13.	77 °C	350 K	170.6 °F
14.	42.9 °C	315.9 K	108.6 °F
15.	-125 °C	148 K	-193 °F
16.	112 °C	385 K	233.6 °F
17.	14 °C	287 K	57 °F
18.	206 °C	479 K	402.8 °F
19.	-65 °C	208 K	-85 °F
20.	571 °C	844 K	1059.8 °F
21.	237.2 °C	510.2 K	455.6 °F
22.	108 °C	381 K	226.4 °F
23.	-223 °C	50 K	-369.4 °F
24.	114.8 °C	387.8 K	237 °F