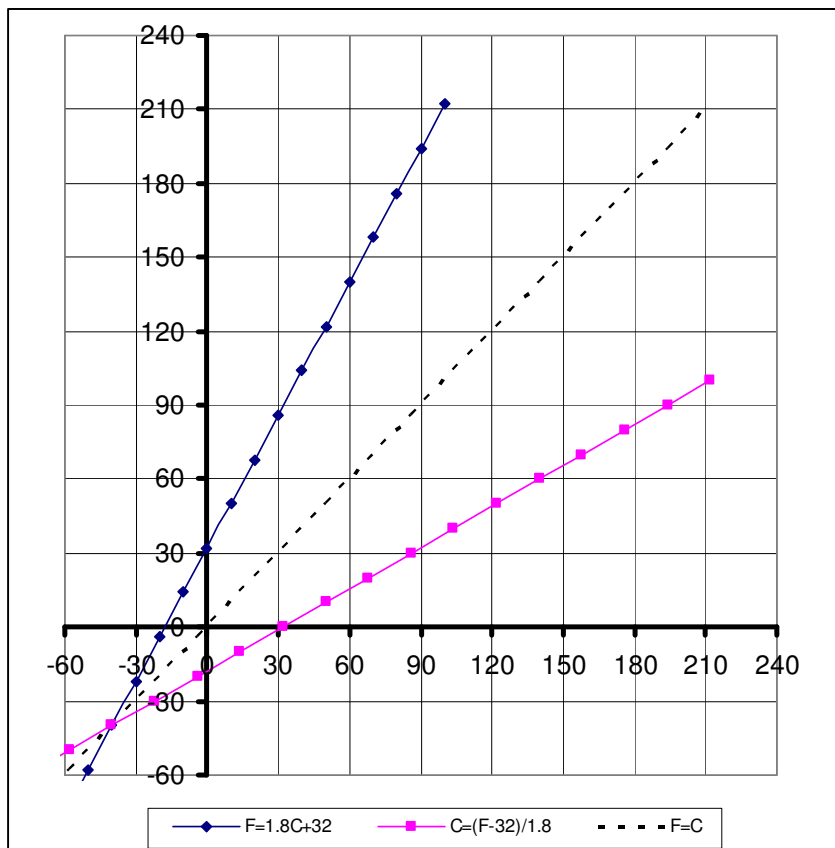1. If we let C = the temperature in degrees Celsius and F = the temperature in degrees Fahrenheit, then C and F are related by the following rules.

C	F=1.8C+32	C=(F-32)/1.8
-60	-76	-60
-50	-58	-50
-40	-40	-40
-30	-22	-30
-20	-4	-20
-10	14	-10
0	32	0
10	50	10
20	68	20
30	86	30
40	104	40
50	122	50
60	140	60
70	158	70
80	176	80
90	194	90
100	212	100

Can you make some relevant observations about the entries in the table and the graphs?

2. A population of bacteria will grow continuously over time if in a medium that is rich in nutrients. Suppose 10,000 bacteria are placed in a nutrient-rich medium and the bacteria reproduce at a continuously compounding rate of 20% per hour. How many bacteria will be living in the medium after 10 hours? How long will it take for the number of bacteria in the medium to reach 100,000?

3. The daily production of an oil well was originally 2,000 barrels per day, but has been declining at a continuously compounding rate of 18% per year. What do you predict will be the daily output of the well 2 years after it began production?

4. Use you calculator to complete that table of values and graphs for the functions $y = e^x$ and $y = \ln(x)$.

x	e^x	ln(x)
0.10		
0.15		
0.20		
0.25		
0.50		
0.75		
1.00		
1.25		
1.50		
1.75		
2.00		
2.25		
2.50		
2.75		
3.00		
3.25		
3.50		