

Name _____

7.6 Regression Equations HW

Use a graphing calculator to find the regression equation for each of the following problems. Round to thousandths.

1-2 The data in the table show the cooling temperatures of a freshly brewed cup of coffee after it is poured from the coffee pot to a serving cup.

Time (in min)	Temp (°F)
0	180
5	169
8	158
15	142
18	135
22	125
30	116
34	113
38	109
42	102
50	101

_____ 1) Plot the points on a graphing calculator then find the appropriate regression equation.

_____ 2) Based on your equation in (a), what will be the temperature of the coffee after 1 hour?

3-4 The data in the table show the average growth rates of Weeping Higan cherry trees.

Age of Tree (in yrs)	Height (in ft)
1	6
2	9.5
3	13
4	15
5	16.6
6	17.5
7	18.5
8	19
9	19.5
10	19.7

_____ 3) Plot the points on a graphing calculator, then find the appropriate regression equation.

_____ 4) Based on your equation, how tall will the tree be when the tree is 20 years old?

5-6 The data in the table shows the median number of hours of leisure time that Americans had each week in various years.

_____ 5) Plot the points on a graphing calculator, then find the appropriate regression equation.

Years since 1973	Leisure Time (in hrs per wk)
0	26.2
7	19.2
14	16.6
20	18.1
24	19.5
27	22.6

_____ 6) Based on your equation, what would be the average number of leisure hours per week in 2005?