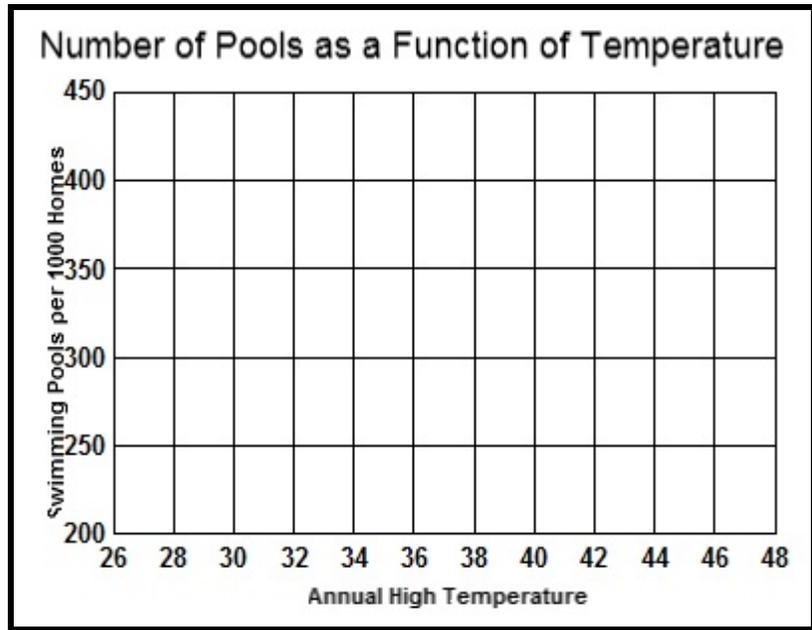


(15 points : 15 minutes)

2. Use the data below to answer the questions on this page.

| Community | Swimming Pools Per 1000 Homes | Annual High Temp. (°C) |
|-----------|-------------------------------|------------------------|
| 1 | 380 | 45 |
| 2 | 430 | 45 |
| 3 | 199 | 29 |
| 4 | 331 | 36 |
| 5 | 224 | 33 |
| 6 | 260 | 30 |



(a) Plot the points on the graph.

(b) Determine the equation of the line that fits the data best and plot it:

intercept = _____ slope = _____ equation: _____

(c) For a new community, what is the estimated number of swimming pools per 1000 homes if the annual high temperature is 45 °C? _____

(d) What is the value of the linear correlation coefficient for the two variables? _____

(e) What percentage of the total variation in number of pools is explained by your line? _____

(f) Write the symbolic expressions and give the values for the three items below:

| | Total variation in number of pools | Explained variation in number of pools | Unexplained variation in number of pools |
|---------------------|------------------------------------|--|--|
| Symbolic expression | _____ | _____ | _____ |
| value | _____ | _____ | _____ |

(g) Write the symbolic expression and give the value for the standard error of estimate:

Symbolic expression _____