$\qquad$

|  | therms | costper | gascost | total |
| :--- | ---: | ---: | ---: | ---: |
| January | 57 | 1.02209 | 58.26 | 64.76 |
| February | 57 | 1.08349 | 61.76 | 68.26 |
| March | 83 | 1.0635 | 88.27 | 94.77 |
| April | 73 | 1.08065 | 78.89 | 85.39 |
| May | 43 | 1.05416 | 45.33 | 51.83 |
| June | 25 | 0.97371 | 24.34 | 30.84 |
| July | 9 | 0.98722 | 8.88 | 15.39 |
| August | 8 | 0.97416 | 7.79 | 14.29 |
| September | 8 | 0.89541 | 7.16 | 13.66 |
| October | 7 | 0.81452 | 5.70 | 12.21 |
| November | 8 | 0.78916 | 6.31 | 12.81 |
| December | 17 | 0.8646 | 14.70 | 21.20 |

1) After completing step \# 1, fill in the above chart. Round your answers to two decimal places.
2) After completing step \# 2, sketch your scatterplot, note the window you used.

$X$ minimum $\qquad$ 0 $\qquad$ X maximum $\qquad$ 90
y minimum $\qquad$ 0
y maximum $\qquad$ 100 $\qquad$
3) After you complete Step \#3,

Equation: $y=1.09258 * x+4.48597$
What does x represent? therms
What is the value of the slope? 1.09258
What does the slope represent in this situation? Cost per therm
What is the y intercept? 4.48597
What does the $y$ intercept represent in this situation? basic cost

Does the slope your equation gives you match any of the cost per therm given in the original data? Why? No. Because the cost per therm changes each month.

Does the $y$ intercept your equation gives you match the basic cost? Why? No. Because the cost per therm changed each month, it did not let the basic cost of $\$ 6.50$ stay constant like it should have.
4) As you complete step \# 4, fill in the values:

```
sum(therms) = 395
mean(therms) = 32.9167 (decimal value)
sum(costper) = 11.6027
mean(costper) = .966889
sum(gascost) = 407.402
mean(gascost) = 33.9502
sum(total) = 485.402
mean(total) = 40.4502
```

Many utility companies offer the option of paying a set amount each month rather than paying the varying cost each month. What amount should the company charge for the set amount? Why?
Student should use the mean(total) ... so they should charge $\$ 40.45$ or maybe $\$ 40.46$ ?

