|  |  |
| --- | --- |
| perch | Proportion eaten |
| 10 | 0 .1 .3 .3 |
| 20 | 0.2 .3 .3 .6 |
| 40 | 0.075 .3 .6 .725 |
| 60 | 0.517 .55 .7 .817 |

The scatter-plot above shows the proportion of perch eaten by bass against the number of perch in a pen before the bass were let in. There is a roughly linear pattern. The least-squares line for predicting proportion eaten from initial count of perch is:

Proportion eaten= 0.120 + (0.0086 x count)

a). When 10 more perch are added to a pen, what happens to the proportion that are eaten (according to the line)? Explain your answer.

b). If there is no perch in a pen, what proportion does the line predict will be eaten? Explain why this prediction is nonsense. What is wrong with using the regression line to predict y when x=0? *You see that the intercept, though it is needed to draw the line, may have no statistical interpretation if x=0 is outside the range of the data.*