**1) Find the equation for the best linear fit for the following data: Actual Data represents population in thousands.**

|  |  |
| --- | --- |
| t=Reference Time | P=Population |
| 0 | 37.21 |
| 10 | 43.50 |
| 20 | 52.05 |
| 30 | 62.53 |
| 40 | 68.30 |

1. b) c) d)

**Answer: a)**

**2) Find the correlation coefficient ® for problem 1.**

**Answer:** r=0.996

**3) Sate your conclusion about correlation at the 0.01 level of significance.**

**Answer:** There is no linear correlation.

There is a linear correlation.

At 0.01 level of significance, table A-5 gives

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**4) What is the best predicted value of y for t=23.**

**Answer:** For t=23, P(23)= 0.812\*23+36.476 = 55.152 Thousand.