|  |
| --- |
| Y' = a + bX prediction formula |
|  |
| Y = a + bX+e general linear model |

correlation



 sums of square cross products

 beta





Sums of squares total

 

Sums of squares between



Sums of squares within or sums of squares error



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Non-standardized linear combination

Y’=a + b1X1 + b2X2 + b3X3… bnXn

Standardized linear combination

Y’=b1X1 + b2X2 + b3X3… bnXn



Sums of squares total

 

Sums of squares between



Sums of squares within or sums of squares error

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Pearson correlation coefficient | correlation | *r* |  | *R*2 = *t*2 / (*t*2 + *DF*), |
| Analysis of Variance | ANOVA | F | SSB/SSW(only applies when groups=2) | f=t2 |
| t-test | t-test | t | $$\sqrt{\frac{SSB}{SSW}}$$ | *t*2 = *DF\*R*2 / (1 - *R*2) $$t=\sqrt{f}$$ |

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$n^{2}$=$\frac{t^{2}}{t^{2}+df}$ eta squared = SSB/SST