F test for Significance of Regression

Dale Easley
University of Dubuque



Use r for correlation and F for regression, generally

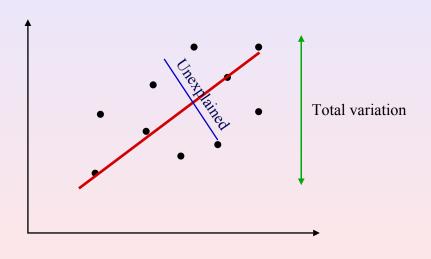
What's the difference? *Your purpose*

- Regression has a clear independent variable
- We are trying to establish a cause-effect relationship.



Slicing mussel shells

F looks at the ratio of variances, explained to unexplained



Worked Example 5.3a-c

X=distance from road Y= traffic noise

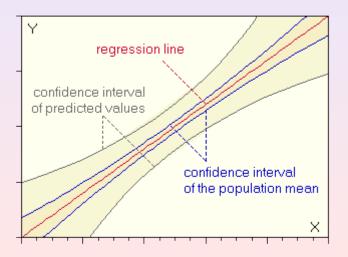
х	у
20	90
40	90
60	86
80	81
100	82
120	75
140	74





Uncertainty in our prediction from a regression line

See Worked Example 5.3D



Uncertainty in our prediction from a regression line

See Worked Example 5.3D

