■■ **LECTURE #14 (Review for Exam)**

**PRACTICE EXAM #2**

**BACKGROUND INFORMATION FOR PART I:** Questions in Part I refer to the simple linear regression analysis in which we try and predict the price of an antique grandfather clock based on the age of the clock. We use the following printouts:

**SX PO #1**

**SX PO #2**



CASE PRICE AGE

 1 1235 127

 2 1080 115

 3 845 127

 4 1522 150

 5 1047 156

 6 1979 182

 7 1822 156

 8 1253 132

 9 1297 137

 10 946 113

 11 1713 137

 12 1024 117

 13 1147 137

 14 1092 153

 15 1152 117

 16 1336 126

 17 2131 170

 18 1550 182

 19 1884 162

 20 2041 184

 21 845 143

 22 1483 159

 23 1055 108

 24 1545 175

 25 729 108

 26 1792 179

 27 1175 111

 28 1593 187

 29 785 111

 30 744 115

 31 1356 194

 32 1262 168

**SX PO #3**

**Correlations (Pearson)**

 PRICE AGE

PRICE 1.0000

AGE 0.7296 1.0000

Cases Included 32

**SX PO #4**

**Least Squares Linear Regression of PRICE**

**Predictor**

**Variables Coefficient Std Error T P**

Constant -192.047 264.372 -0.73 0.4732

AGE 10.4798 1.79327 5.84 0.0000

R² 0.5324 Mean Square Error (MSE) 74818.8

Adj R² 0.5168 Standard Deviation 273.530

AICc 363.92

PRESS 2.55E+06

**SX PO #5**

**Predicted/Fitted Values of PRICE**

Lower Predicted 1301.9 Lower Fitted 1679.4

Predicted Value 1903.9 Fitted Value 1903.9

Upper Predicted 2506.0 Upper Fitted 2128.5

SE (Predicted) 294.80 SE (Fitted) 109.95

Unusualness (Leverage) 0.1616

Percent Coverage 95

Corresponding T 2.04

Predictor Values: AGE=200.00