Table 30-4 Linear and Polynomial Regression of Psychomotor Ability on Age

```
* Curve Estimation.
TSET NEWVAR=NONE.
CURVEFIT
  /VARIABLES=psych WITH age
  /CONSTANT
  /MODEL=LINEAR QUADRATIC
  /PRINT ANOVA
  /PLOT FIT.
```

Curve Fit

Model Description

Model Name		MOD_4
Dependent Variable	1	psych
Equation	1	Linear
	2	Quadratic
Independent Variable		age
Constant		Included
Variable Whose Values Label Observations in Plots		Unspecified
Tolerance for Entering Terms in Equations		.0001

Case Processing Summary

	N
Total Cases	30
Excluded Cases[a]	0
Forecasted Cases	0
Newly Created Cases	0

a. Cases with a missing value in any variable are excluded from the analysis.

Variable Processing Summary

		Variables	
		Dependent	Independent
		psych	age
Number of Positive Values		30	30
Number of Zeros		0	0
Number of Negative Values		0	0
Number of Missing Values	User-Missing	0	0
	System-Missing	0	0

psych

Linear

Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.204	.042	.008	2.765

The independent variable is age.

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Regression	9.330	1	9.330	1.221	.279
Residual	214.037	28	7.644		
Total	223.367	29			

The independent variable is age.

Coefficients

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
age	.043	.039	.204	1.105	.279
(Constant)	8.594	1.175		7.315	.000

Quadratic

Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.552	.305	.253	2.398

The independent variable is age.

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Regression	68.105	2	34.052	5.922	.007
Residual	155.262	27	5.750		
Total	223.367	29			

The independent variable is age.

Coefficients

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
age	.686	.204	3.242	3.364	.002
age ** 2	-.011	.004	-3.081	-3.197	.004
(Constant)	1.261	2.510		.502	.619