**Instructor Resources:**

Answers to Case Study # 1: Bottled Water

# Regression Analysis: winter

The regression equation is

Qbw0 = 219 - 52.6 Pbw0 + 17.6 Pmachine0 - 30.9 Ppopcorn0 + 20.1 income0

Predictor Coef SE Coef T P

Constant 219.27 25.82 8.49 0.000

Pbw0 -52.621 2.635 -19.97 0.000

Pmachine0 17.562 4.859 3.61 0.000

Ppopcorn0 -30.90 12.15 -2.54 0.012

income0 20.0541 0.4859 41.27 0.000

S = 13.7426 R-Sq = 94.5% R-Sq(adj) = 94.3%

Analysis of Variance

Source DF SS MS F P

Regression 4 400742 100185 530.48 0.000

Residual Error 123 23230 189

Total 127 423971

# Regression Analysis: summer

The regression equation is

Qbw1 = 268 - 24.6 Pbw1 + 21.4 Pmachine1 - 57.2 Ppopcorn1 + 19.3 income1

Predictor Coef SE Coef T P

Constant 267.78 27.42 9.76 0.000

Pbw1 -24.564 2.799 -8.78 0.000

Pmachine1 21.388 5.161 4.14 0.000

Ppopcorn1 -57.24 12.90 -4.44 0.000

income1 19.2871 0.5161 37.37 0.000

S = 14.5964 R-Sq = 92.5% R-Sq(adj) = 92.2%

Analysis of Variance

Source DF SS MS F P

Regression 4 321860 80465 377.67 0.000

Residual Error 123 26206 213

Total 127 348066

**400\*'Pbw00'-75\*'Pgas'+c28**

The regression equation is

QbwSupply0 = 14.3 + 391 Pbw00 - 69.7 Pgas

Predictor Coef SE Coef T P

Constant 14.29 19.08 0.75 0.455

Pbw00 391.179 7.725 50.64 0.000

Pgas -69.669 3.018 -23.09 0.000

S = 56.9525 R-Sq = 92.3% R-Sq(adj) = 92.2%