

TABLE 15.1 Preliminary Calculations in Step 1 of Example 15.1

| Mood | Eating | Deviation Scores | | Sum of Squares | | |
|-----------|-------------|------------------|-----------|----------------------|---------------|-----------------|
| X | Y | $X - M_x$ | $Y - M_y$ | $(X - M_x)(Y - M_y)$ | $(X - M_x)^2$ | $(Y - M_y)^2$ |
| 6 | 480 | 2 | -52 | -103.75 | 4 | 2,691 |
| 4 | 490 | 0 | -42 | 0 | 0 | 1,754 |
| 7 | 500 | 3 | -32 | -95.63 | 9 | 1,016 |
| 4 | 590 | 0 | 58 | 0 | 0 | 3,379 |
| 2 | 600 | -2 | 68 | -136.25 | 4 | 4,641 |
| 5 | 400 | 1 | -132 | -131.88 | 1 | 17,391 |
| 3 | 545 | -1 | 13 | -13.13 | 1 | 172 |
| 1 | 650 | -3 | 118 | -354.38 | 9 | 13,954 |
| $M_x = 4$ | $M_y = 532$ | | | $SS_{xy} = -835$ | $SS_x = 28$ | $SS_y = 44,997$ |

The sum of the products of deviations for X and Y

The sum of squares for X

The sum of squares for Y

The key values that are substituted into the formula for the Pearson correlation coefficient are circled.