6-3 Computation of the Standard Error of Estimate (Data from Table 6-2)

Subject	X	Y	X^2	Y^2	XY
1	1010	1.3	1,020,100	1.69	1313.0
2	1033	.1	1,067,089	.01	103.3
3	1103	1.5	1,216,609	2.25	1654.5
4	1170	1.8	1,368,900	3.24	2106.0
5	1250	3.9	1,562,500	15.21	4875.0
$N = 5$	$\Sigma X = 5{,}566$	$\Sigma Y = 8.6$	$\Sigma X^2 = 6{,}235{,}198$	$\Sigma Y^2 = 22.4$	$\Sigma XY = 10{,}051.8$
	$(\Sigma X)^2 = 30{,}980{,}356$	$(\Sigma Y)^2 = 73.96$			

Intermediate Quantities

$$(\mathrm{I}_{XY}) = N(\Sigma XY) - (\Sigma X)(\Sigma Y) = 5(10{,}051.8) - (5566)(8.6) = 2391.40$$

$$(\mathrm{II}_X) = N\Sigma X^2 - (\Sigma X)^2 = 5(6{,}235{,}198) - 30{,}980{,}356 = 195{,}634$$

$$(\mathrm{III}_Y) = N\Sigma Y^2 - (\Sigma Y)^2 = 5(22.4) - 73.96 = 38.04$$

(*continued*)