

**TABLE 3.5** Sample variance calculations with hypothetical data

<i>Observation</i>	<i>Education, <math>x_i</math></i>	$x_i - \bar{x}$	$(x_i - \bar{x})^2$	
1	12	-4	16	
2	14	-2	4	
3	16	0	0	
4	18	2	4	
5	20	4	16	
			40	$= \sum_{i=1}^5 (x_i - \bar{x})^2$

  

<i>Observation</i>	<i>Earnings, <math>y_i</math></i>	$y_i - \bar{y}$	$(y_i - \bar{y})^2$	
1	\$20,000	-30,000	900,000,000	
2	\$53,000	3,000	9,000,000	
3	\$35,000	-15,000	225,000,000	
4	\$80,000	30,000	900,000,000	
5	\$62,000	12,000	144,000,000	
			2,178,000,000	$= \sum_{i=1}^5 (y_i - \bar{y})^2$