

Find the variance and standard deviation.

9.  $\{3, 3, 4, 5, 5\}$

$x$					
$x - \bar{x}$					
$(x - \bar{x})^2$					

10.  $\{10, 12, 14, 15, 18, 20, 23\}$

$x$							
$x - \bar{x}$							
$(x - \bar{x})^2$							

11.  $\{7, 14, 21, 28, 35, 42\}$

$x$						
$x - \bar{x}$						
$(x - \bar{x})^2$						

12. **Measurement** Students in a fourth-grade class were asked to measure the widths of their desks in centimeters. They recorded the following measures: 49, 50, 49, 48, 49, 19, 50, 49, 48, 50, 49, and 50. Identify the outlier, and describe how it affects the mean and the standard deviation.

Find the variance and standard deviation.

20.  $\{4, 4, 4, 4, 5\}$

$x$					
$x - \bar{x}$					
$(x - \bar{x})^2$					

21.  $\{8, 12, 30, 35, 48, 50, 62\}$

$x$							
$x - \bar{x}$							
$(x - \bar{x})^2$							

22.  $\{14, 26, 40, 52\}$

$x$				
$x - \bar{x}$				
$(x - \bar{x})^2$				

23. **Football** The 2004 Cincinnati Bengals scored 24, 16, 9, 17, 17, 23, 20, 26, 17, 14, 58, 27, and 28 points in their first 13 games. Find the mean and the standard deviation of the data. Identify the outlier, and describe how it affects the mean and the standard deviation.

For a data set with a first quartile of  $Q_1$  and a third quartile of  $Q_3$ , a value less than  $Q_1 - 1.5(IQR)$  or greater than  $Q_3 + 1.5(IQR)$  may be considered to be an outlier. Use this rule to identify any outliers in each data set. Show your work.

26.  $\{2, 3, 4, 5, 5, 25\}$       27.  $\{91, 90, 79, 15, 82, 90, 88\}$       28.  $\{1, 36, 34, 33, 35, 92\}$