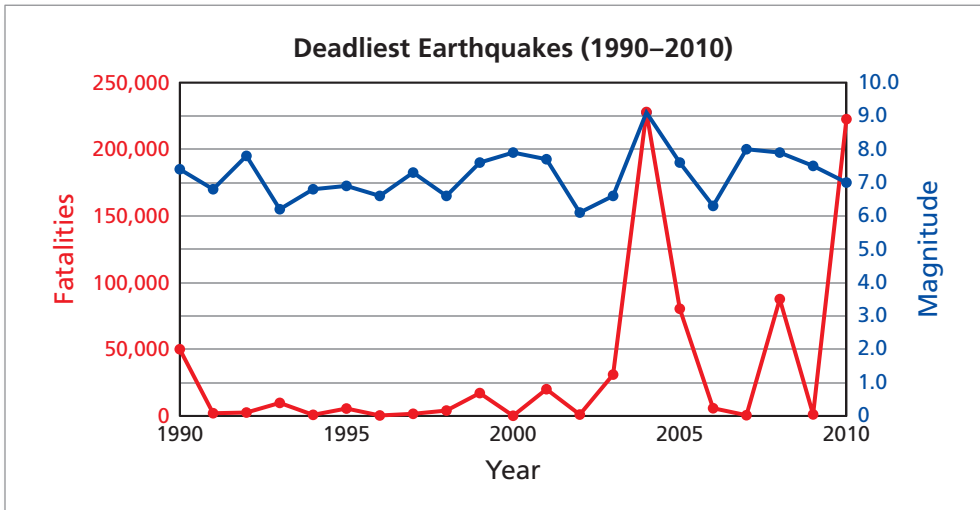


Deadliest Earthquakes The double line graph shows the world’s deadliest earthquake for each year from 1990 through 2010. In Exercises 17–22, use the double line graph. (See Examples 5 and 6.)



17. Which years appear to be outliers when considering the numbers of fatalities?
18. Which years appear to be outliers when considering the magnitudes of the earthquakes?



19. Find the effect of outliers on averages.
 - a. Use a spreadsheet to find the mean and the median number of fatalities.
 - b. Use a spreadsheet to find the mean and the median number of fatalities without the two most significant outliers.
 - c. Do these outliers have a greater effect on the mean or the median? Explain your reasoning.

20. How do outliers affect the mode of a data set?
21. Does the mean or the median number of fatalities better describe the average number of fatalities each year? Explain your reasoning.
22. Determine whether each statement is valid.
 - a. On average, the most fatal earthquakes have a magnitude around 6.0.
 - b. The number of fatalities from an earthquake depends on the earthquake’s magnitude.

