Study Guide Review

MODULE 11 Analyzing and Comparing Data

Key Vocabulary

circle graph *(gráfica circular)*

? ESSENTIAL QUESTION

How can you solve real-world problems by analyzing and comparing data?

EXAMPLE 1

There are 500 students at Trenton Middle School. The percent of students in each grade level is shown in the circle graph. Calculate the number of students in each grade.

$43\% = 0.43$ $31\% = 0.31$ $26\% = 0.26$

$0.43 \times 500 = 215$ $0.31 \times 500 = 155$ $0.26 \times 500 = 130$

There are 215 6th graders, 155 7th graders, and 130 8th graders.

Middle School Students by Grade

8th grade 26%
6th grade 43%
7th grade 31%
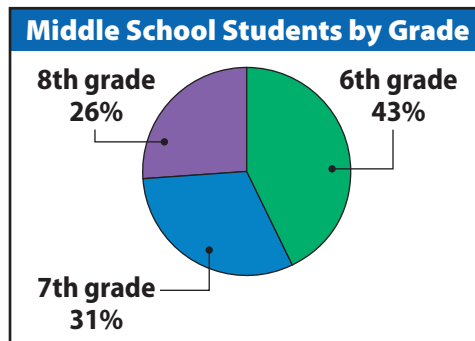
EXAMPLE 2

The box plots show the amount that each employee from the same office donated to two charities. Compare the shapes, centers and spreads of the box plots.

Charity A

Charity B

8 12 16 20 24 28 32 36 40 44 48 52
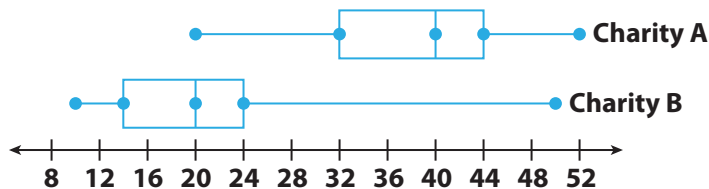
Shapes: The lengths of the boxes are similar, as are the overall lengths of the graphs. The whiskers for the two graphs are very different. The whiskers for Charity A are similar in length. The left whisker for Charity B is much shorter than the right one.

Centers: The median for Charity A is $40, and for Charity B is $20. That means the median donor gave $20 more for Charity A.

Spreads: The interquartile range for Charity A is $44 - 32 = 12$. The interquartile range for Charity B is slightly less, $24 - 14 = 10$.

The donations varied more for Charity B and were lower overall.