LESSON MAKER PRO

Data Slice Detectives

Compare parts, totals, and equivalent shares.

GRADE 7 · TEKS 7.6.G

7.6.G "solve problems using data represented in bar graphs, dot plots, and circle graphs, including part-to-whole and part-to-part comparisons and equivalents;"

NAME _____ DATE _____

COMPARE THE DATA

To find a part of a whole, write part/total and simplify. To compare two parts, write one part to the other part as a ratio. Equivalent fractions show the same share, even when the totals are different.

WORKED EXAMPLE

What fraction of the model is shaded? Write the fraction in simplest form.

1. Count the shaded parts: 5.
2. Count all equal parts: 13.
3. Write the fraction as 5/13.
4. 5/13 is already in simplest form.

Answer: 5/13

PRACTICE 6 problems

1 A survey shows that 8 out of 24 students bring lunch from home. What fraction of the students bring lunch from home? Write the fraction in simplest form.

ANSWER _____

2 At a club fair, 6 students choose art, 14 choose music, and 10 choose sports. What is the ratio of students choosing art to students choosing music? Write the ratio in simplest form.

ANSWER _____

3 A poll has 36 votes. Robotics receives 9 votes. What fraction of the votes are for robotics? Write the fraction in simplest form.

ANSWER _____

4 In a class survey, 12 students choose basketball, 18 choose soccer, and 6 choose skateboarding. How many times as many students choose soccer as skateboarding?

ANSWER _____

5 A school store sells 27 water bottles. Two-thirds of the bottles are reusable. How many reusable water bottles are sold?

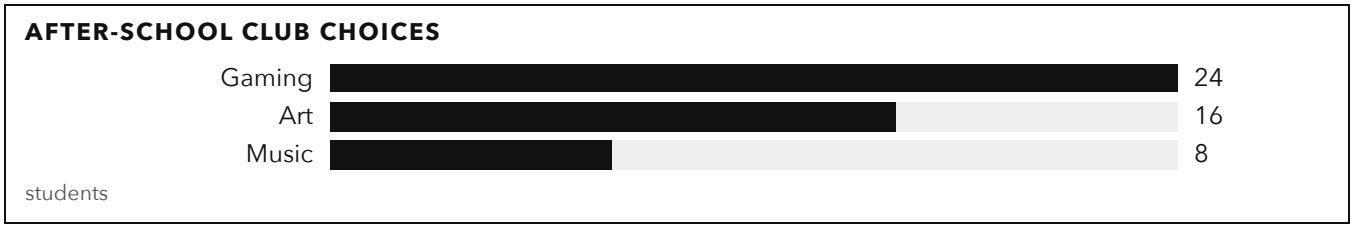
ANSWER _____

6 A team earns 7 wins in 21 games. What fraction of its games does the team win? Write the fraction in simplest form.

ANSWER _____

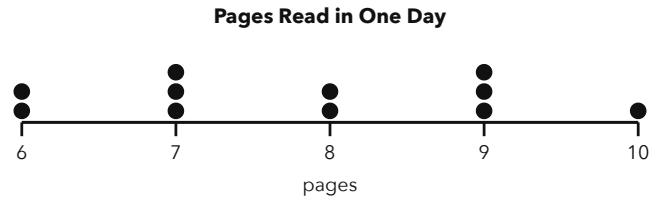
APPLY IT Show your work

1 The bar graph shows students' first choices for an after-school club. What fraction of the students choose art? What is the ratio of students choosing gaming to students choosing music? Write both answers in simplest form.



ANSWER _____

2 The dot plot shows how many pages each student in a reading group read in one day. What fraction of the students read 9 pages or more? What is the ratio of students who read 6 pages to students who read 8 pages? Write both answers in simplest form.



ANSWER _____

CHALLENGE One step up

Two video polls have different numbers of voters. In Poll A, 12 of 18 voters choose the same creator. In Poll B, 16 of 24 voters choose that creator. Do the polls show the same fraction of voters choosing the creator? Explain by simplifying both fractions.

WORK SPACE AND ANSWER

ANSWER KEY

Data Slice Detectives

GRADE 7 · TEKS 7.6.G

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	A survey shows that 8 out of 24 students bring lunch from home. What fraction of the students bring lunch from home? Write the fraction in simplest form.	**1/3**
2	At a club fair, 6 students choose art, 14 choose music, and 10 choose sports. What is the ratio of students choosing art to students choosing music? Write the ratio in simplest form.	**3:7**
3	A poll has 36 votes. Robotics receives 9 votes. What fraction of the votes are for robotics? Write the fraction in simplest form.	**1/4**
4	In a class survey, 12 students choose basketball, 18 choose soccer, and 6 choose skateboarding. How many times as many students choose soccer as skateboarding?	**3**
5	A school store sells 27 water bottles. Two-thirds of the bottles are reusable. How many reusable water bottles are sold?	**18**
6	A team earns 7 wins in 21 games. What fraction of its games does the team win? Write the fraction in simplest form.	**1/3**

PART 2 · APPLY IT

1. **1/3; 3:1** Add the three bars to get 48 students. Art is 16/48, or 1/3, and gaming to music is 24:8, or 3:1.
2. **4/11; 1:1** Four of the 11 students read 9 or 10 pages. Two students read 6 pages and two read 8 pages, so the ratio is 2:2, or 1:1.

CHALLENGE

Yes. 12/18 = 2/3 and 16/24 = 2/3, so both polls show the same fraction.

Accept equivalent fractions and ratios if they show the same comparison, unless the item asks for simplest form. For the challenge, accept any clear explanation that shows both fractions simplify to 2/3.