LESSON MAKER PRO

Slices and Scores

Use proportions to read data and plan circle graphs.

GRADE 7 · 7.D.1.2

7.D.1.2 "Use reasoning with proportions to display and interpret data in circle graphs (pie charts) and histograms."

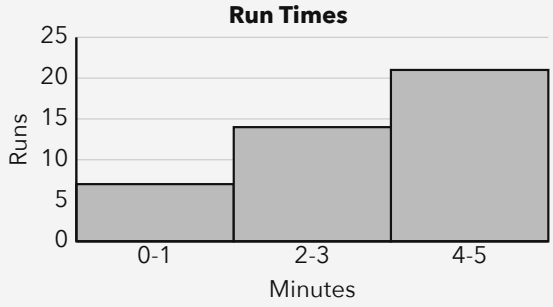
NAME _____ DATE _____

COUNT, DIVIDE, DISPLAY

Each bar in a histogram counts values in an interval. Divide a bin count by the total to find its share. For a circle graph, multiply a share by 360° to find its slice angle.

WORKED EXAMPLE

What fraction of runs are in the 2-3 minute bin?



1. Total runs: 7 + 14 + 21 = 42.
2. The 2-3 minute bin has 14 runs.
3. Its share is 14/42 = 1/3.

Answer: 1/3

PRACTICE 4 problems

1 Six of 24 students chose soccer. What percent of a circle graph would show soccer?

ANSWER _____

2 Eight of 40 club members chose art. What angle should art have in a circle graph?

ANSWER _____

3 Skating has a 90° slice in a circle graph of 28 votes. How many votes did skating get?

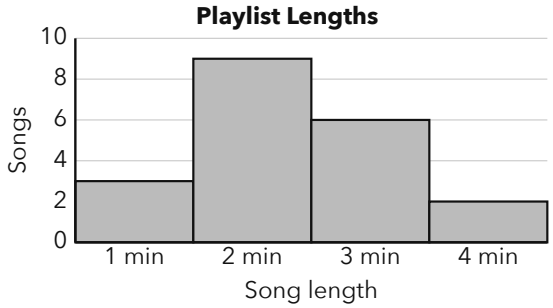
ANSWER _____

4 Nine of 36 songs are shorter than 3 minutes. What angle would represent them in a circle graph?

ANSWER _____

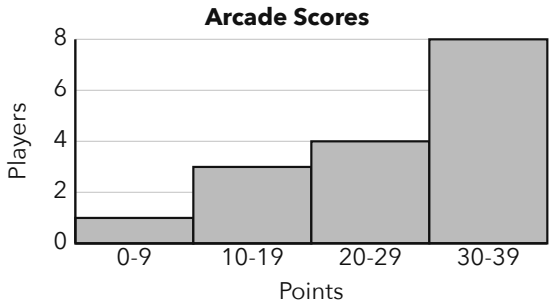
APPLY IT Show your work

1 A playlist lists song lengths in whole minutes. What percent of its songs last 2 minutes?



ANSWER _____

2 The histogram shows arcade scores. If 64 players scored in the same proportions, how many would score 20 to 29 points?



ANSWER _____

CHALLENGE One step up

In a 48-vote survey, racing got 1/3 of the votes and puzzles got 1/4. The rest chose sports. How many votes did sports get, and what angle should its circle graph slice have?

WORK SPACE AND ANSWER

ANSWER KEY

Slices and Scores

GRADE 7 · 7.D.1.2

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Six of 24 students chose soccer. What percent of a circle graph would show soccer?	**25%**
2	Eight of 40 club members chose art. What angle should art have in a circle graph?	**72°**
3	Skating has a 90° slice in a circle graph of 28 votes. How many votes did skating get?	**7 votes**
4	Nine of 36 songs are shorter than 3 minutes. What angle would represent them in a circle graph?	**90°**

PART 2 · APPLY IT

1. **45%** There are 20 songs. The 2-minute bin has 9, and 9/20 = 45%.
2. **16 players** The 20-29 bin contains 4 of 16 players. At the same proportion, 4/16 of 64 is 16.

CHALLENGE

20 votes and 150°

For the challenge, racing has 16 votes and puzzles has 12, leaving 20 for sports. The sports angle is 20/48 × 360° = 150°.