

Football Yards & Graphs

Use mean, median, mode and range to make sense of game stats. All players are made up. Show your work!

Name _____

Date _____

DATA TOOLKIT

Mean

add them up,
÷ how many

Median

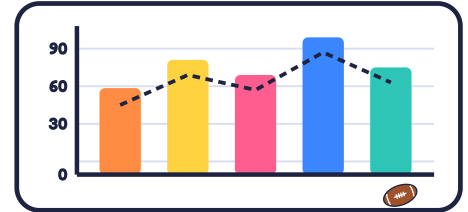
middle value
in order

Mode

value that
shows up most

Range

highest –
lowest



ROOKIE

- 1 Jay Rivers ran for **64, 82, 70, 82, 97** yards in 5 games. What is the **mean** (average)?

WORK SPACE

_____ yards

ROOKIE

- 2 Use Jay's yards again: **64, 82, 70, 82, 97**. What is the **median**?

WORK SPACE

_____ yards

STARTER

- 3 For Jay's yards (**64, 82, 70, 82, 97**), find the **mode** and the **range**.

WORK SPACE

mode _____ range _____

STARTER

- 4 In game 6, Jay runs for **109 yards**. What is his **new mean** for all 6 games?

WORK SPACE

_____ yards

PRO

- 5 Quarterback **Tess Monroe** completes **18 of 24** passes. What percent of her passes did she complete?

WORK SPACE

_____ %

PRO

- 6 A running back gains **120 yards on 16 carries**. What is his average number of yards per carry?

WORK SPACE

_____ yards

ALL-STAR

- 7 The Otters scored **21, 14, 28, 35, 17** and **24** points in 6 games. What is the **median** score?

WORK SPACE

_____ points

CHALLENGE ★

- 8 A receiver gained **85, 102, 76** and **93** yards in 4 games. How many yards does she need in game 5 to have a mean of **90**?

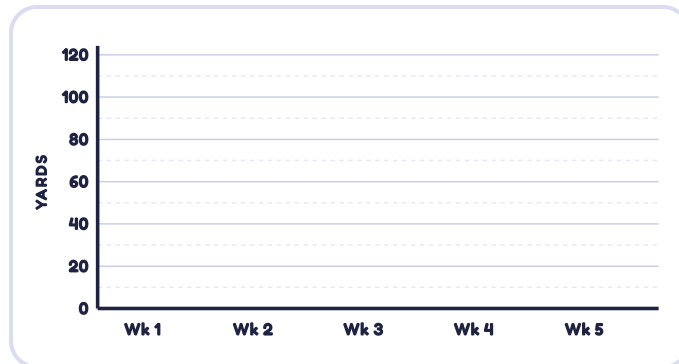
WORK SPACE

_____ yards

A Make a Bar Graph

Here are the made-up Otters' passing yards for 5 weeks. Use the table to draw the bars.

WEEK	YARDS
Week 1	60
Week 2	100
Week 3	80
Week 4	120
Week 5	90



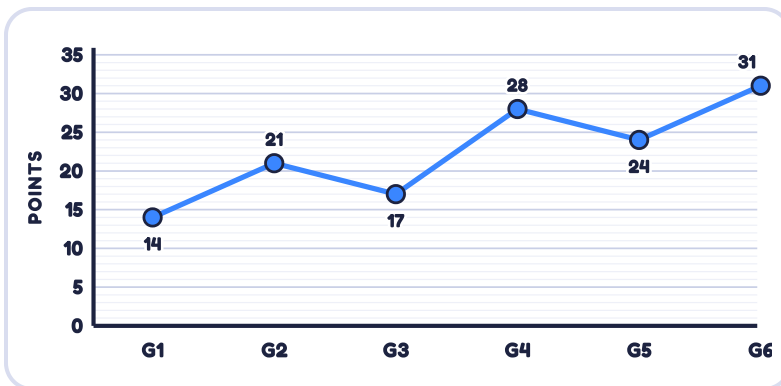
- 1 Draw a bar for each week.
- 2 Which week had the most yards?

- 3 What is the total for all 5 weeks?

- 4 What is the mean per week?

B Read the Line Graph

This graph shows the made-up Comets' points in each of 6 games. Each dark grid line is 5 points; each light line is 1 point.



- 1 In which game did the Comets score the most points? How many?

- 2 Between which two games in a row did their score go up the most? By how much?

- 3 What is the mean score for the 6 games?

- 4 In how many games did they score **more** than the mean?

C Which Average?

Pick the right tool for each data set.

- 1 Field goal distances: **22, 35, 41, 28, 64** yards. Find the mean and median. Which one better shows a **typical** kick? Why?

WORK SPACE

mean _____ median _____

- 2 Punt distances: **38, 42, 45, 42, 51** yards. Find the **mode** and the **range**.

WORK SPACE

mode _____ range _____

- 3 A team averaged **25 points** in **4 games**. Three scores were **21, 30** and **24**. What was the 4th score?

WORK SPACE

_____ points

Answer Key (for teachers & parents)

Answers for **Football Yards & Graphs**, with the work shown where it helps. Print pages 1 and 2 for students, and keep this page for checking.

Page 1 Problems

1. **79 yards** ($395 \div 5$)
2. **82 yards** (64, 70, 82, 82, 97)
3. **mode 82, range 33** ($97 - 64$)
4. **84 yards** ($504 \div 6$)
5. **75%** ($18 \div 24$)
6. **7.5 yards** ($120 \div 16$)
7. **22.5 points** (middle two: 21 and 24)
8. **94 yards** ($450 - 356$)

A • Make a Bar Graph

1. **Bars:** 60, 100, 80, 120, 90
2. **Week 4** (120)
3. **450 yards**
4. **90 yards**

B • Read the Line Graph

1. **Game 6, 31 points**
2. **Game 3 to Game 4, +11**
3. **22.5 points** ($135 \div 6$)
4. **3 games** (28, 24, 31)

C • Which Average?

1. **mean 38, median 35;** the median, because the 64-yard kick pulls the mean up
2. **mode 42, range 13**
3. **25 points** ($100 - 75$)

Quick score

Page 1 problems	_____ / 8
A • Make a Bar Graph	_____ / 4
B • Read the Line Graph	_____ / 4
C • Which Average?	_____ / 3
Total	_____ / 19

Skills practiced

Mean

Median

Mode and range

Bar graphs

Line graphs

Outliers

Teaching tip: For an even number of values, the median is halfway between the two middle numbers. Ask students to put values in order before finding the median.