LESSON MAKER PRO

# Data in Focus

*Compare what is typical and how much values vary.*

**HIGH SCHOOL · A1.D.1**

**A1.D.1** "Display, describe, and compare data. For linear relationships, make predictions, and assess the reliability of those predictions. Display, describe, and compare data sets using summary statistics (central tendency and spread (range))..."

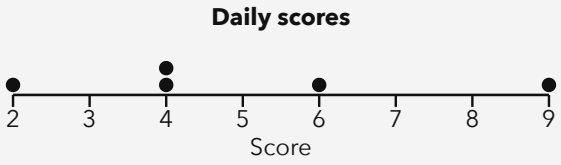
NAME _____ DATE _____

## MEAN AND RANGE

To find the mean, add the values and divide by the number of values. To find the range, subtract the least value from the greatest. A smaller range means the values are less spread out.

### WORKED EXAMPLE

Find the mean and range of the dot plot.




1. The values are 2, 4, 4, 6, and 9.
2. Their sum is 25.
3. Mean: 25/5 = 5.
4. Range: 9 - 2 = 7.

**Answer: Mean: 5; range: 7.**

## PRACTICE 4 problems

**1** Find the mean and range of 10, 12, 14.

**ANSWER** _____

**2** Find the mean and range of 15, 15, 18, 20.

**ANSWER** _____

**3** Find the mean and range of 21, 23, 23, 25.

**ANSWER** _____

**4** Group A: 30, 30, 36. Group B: 28, 32, 36. Which has the smaller range? Give both ranges.

**ANSWER** _____

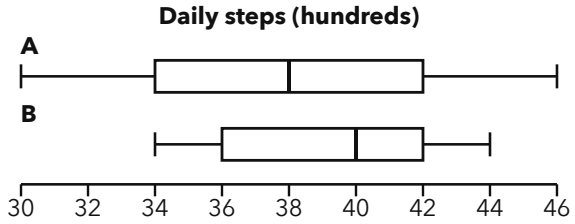
## APPLY IT Show your work

**1** The plot shows minutes spent gaming on five school nights. Find the mean and range.




**ANSWER** _____

**2** Two friends track daily steps in hundreds. From the box plots, whose median is higher, and whose range is smaller?




**ANSWER** _____

## CHALLENGE One step up

Two groups record video clip lengths in seconds. Group A: 60, 62, 64, 66, 68. Group B: 58, 63, 64, 65, 70. Which group is more consistent by range? Show both means and ranges.

WORK SPACE AND ANSWER

# Data in Focus



## PART 1 · PRACTICE

| # | PROBLEM | ANSWER |
|---|---|---|
| 1 | Find the mean and range of 10, 12, 14. | **Mean: 12; range: 4.** |
| 2 | Find the mean and range of 15, 15, 18, 20. | **Mean: 17; range: 5.** |
| 3 | Find the mean and range of 21, 23, 23, 25. | **Mean: 23; range: 4.** |
| 4 | Group A: 30, 30, 36. Group B: 28, 32, 36. Which has the smaller range? Give both ranges. | **Group A; A's range is 6, and B's range is 8.** |

## PART 2 · APPLY IT

1. **Mean: 53 minutes; range: 7 minutes.** The values sum to 265, so the mean is 265/5 = 53. The range is 57 - 50 = 7.
2. **B has the higher median and the smaller range.** The medians are 38 and 40 hundreds of steps. A's range is 16 hundreds, while B's is 10 hundreds.

## CHALLENGE

**Both means are 64 seconds. A's range is 8 seconds, and B's is 12 seconds, so A is more consistent by range.**

Accept equivalent wording for comparisons. In the box-plot problem, answers in steps are also valid: the medians are 3,800 and 4,000 steps, and the ranges are 1,600 and 1,000 steps.