

NWEA Assessment Item Illustrating 4.MD.B.4

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Domain: Measurement and Data

4.MD.B: Represent and interpret data.

Calculator Availability: No

Use the line plot to answer the question.

Leon recorded the distance that he swam each day for a week.

Distance Swam

Distance (miles)	Number of X's
$\frac{3}{8}$	1
$\frac{4}{8}$	3
$\frac{6}{8}$	2
$\frac{8}{8}$	1

About how many miles did Leon swim?

- A. between 3 and 4 miles
- B. between 4 and 5 miles
- C. between 5 and 6 miles
- D. between 6 and 7 miles

Alignment: 4.MD.B.4: Make a line plot to display a data set of measurements in fractions of a unit ($\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$). Solve problems involving addition and subtraction of fractions by using information presented in line plots.

This item attends to the data portion of the Measurement and Data standards for grade 4. This item assesses the second part of the standard—“solve problems involving addition and subtraction of fractions”—rather than addressing the first part, “make a line plot.”

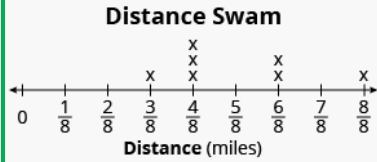
Coherence: Students first worked with line plots in grade 3, when they created line plots representing data in halves and fourths.^{3.MD.B.4} This standard is purposefully designed to support the work students do in the grade 4 Number and Operations—Fractions domain, in which they order fractions and add and subtract fractions with like denominators.^{4.NF.A, 4.NF.B} Students will continue working with line plots in grade 5.^{5.MD.B.2} It is important that students become familiar with line plots in grades 3–5 because they will use line plots when they learn about measures of center in grade 6.^{6.SP.A, 6.SP.B}

Rigor: This item attends to conceptual understanding, procedural skill, and application. Students use conceptual understanding to read the line plot and to recognize that the answer, $\frac{35}{8}$, is a number that lives somewhere between the whole numbers four and five. Students use grade-level procedural skill when adding some or all the fractions on the line plot to determine the approximate number of miles that Leon swam during the week. The context is straightforward and does not require a great deal of interpretation.

Answer Key:

Use the line plot to answer the question.

Leon recorded the distance that he swam each day for a week.



About how many miles did Leon swim?

- A. between 3 and 4 miles
- B. between 4 and 5 miles
- C. between 5 and 6 miles
- D. between 6 and 7 miles

Learn More

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