

Grade 4 · Line Plots with Fractions · Worksheet

Common Core 4.MD.B.4 · mathovore.fr

Name: _____ Date: ____/____/____ Score: _____

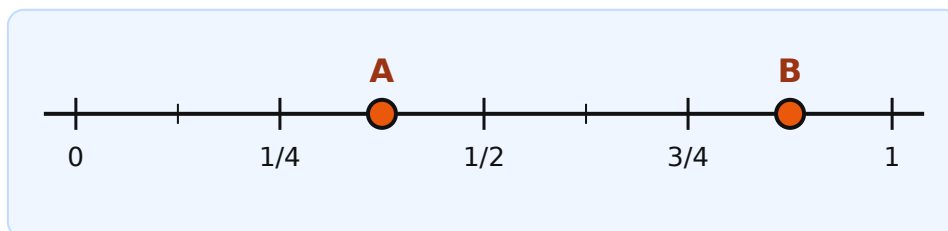
These 22 problems practice standard 4.MD.B.4: reading line plots whose number lines use halves, fourths, and eighths, making a line plot from measurements, and solving addition and subtraction problems with the data.

The problems start with reading points and counting marks, then move to differences, totals, and multi-step word problems.

Grade 4 Common Core: 4.MD.B.4

Problem 1: Reading points on a number line

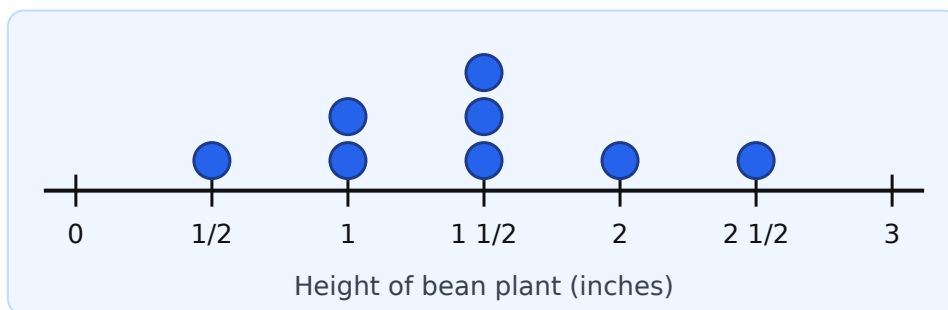
Write the fraction that names point A and point B.



Two points on a number line.

Problem 2: Counting marks above a value

Use the line plot of bean plant heights to answer each question.

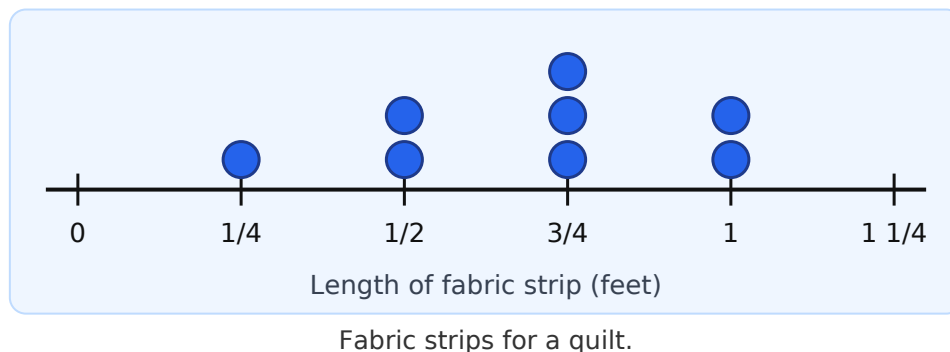


Heights of 8 bean plants.

- Count the plants that are $1\frac{1}{2}$ in. tall.
- Count the plants that are taller than 1 inch.

Problem 3: How many data values?

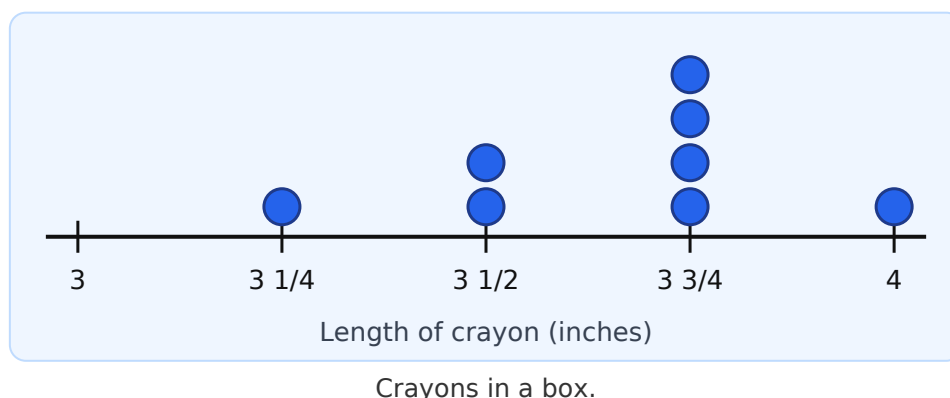
Study the line plot of the fabric strips Diego cut for a quilt.



- Count the strips he measured in all.
- Count the strips that are exactly $\frac{3}{4}$ ft long.

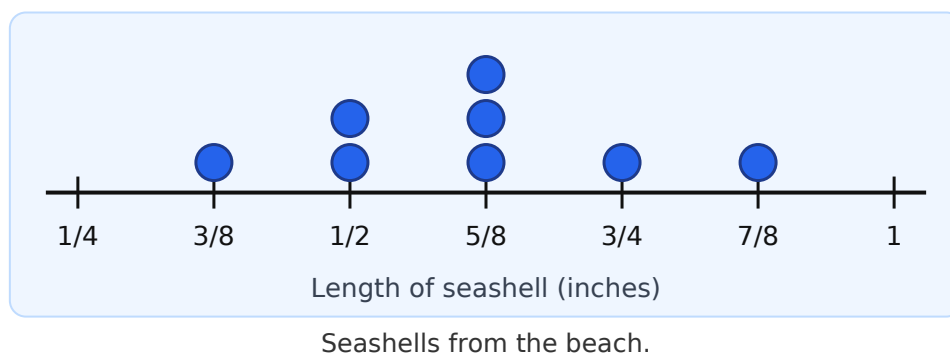
Problem 4: The most common length

Find the length that appears most often on the line plot, and tell how many crayons have that length.



Problem 5: Shortest and longest

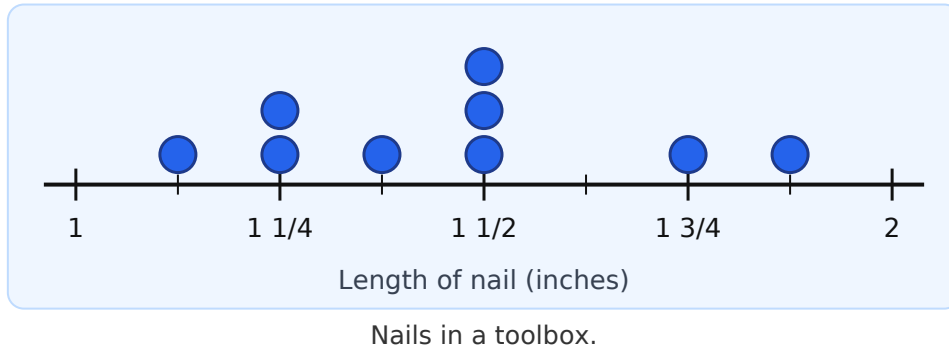
Use the line plot of 8 seashell lengths.



- Write the length of the shortest shell.
- Write the length of the longest shell.

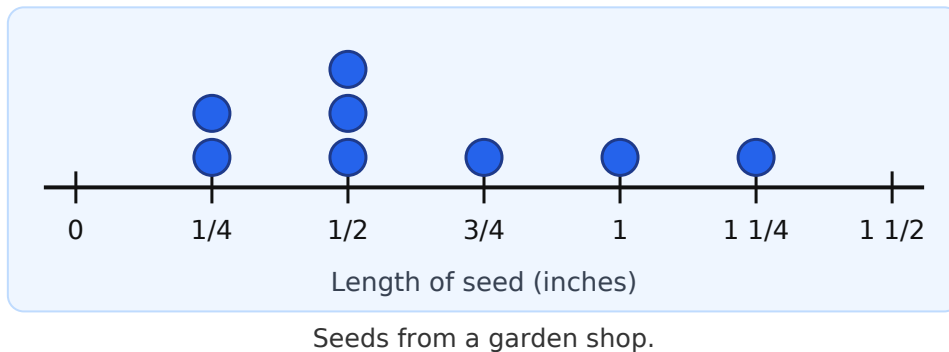
Problem 6: Longer than a given length

Count the nails that are longer than $1\frac{1}{4}$ in.



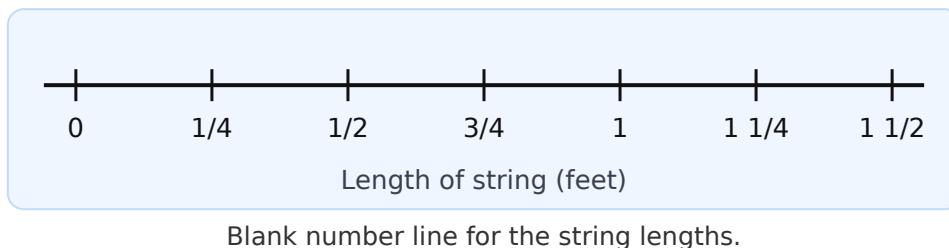
Problem 7: Comparing two groups

Compare the number of seeds shorter than $\frac{1}{2}$ in. with the number longer than $\frac{1}{2}$ in. Tell which group is larger and by how many seeds.



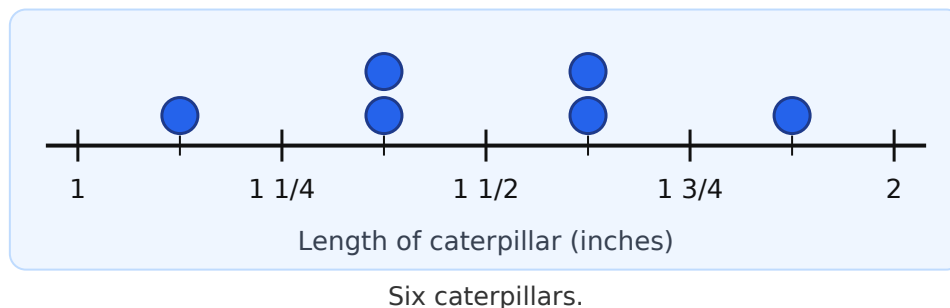
Problem 8: Make a line plot

Copy the number line and make a line plot of the lengths of 7 pieces of string Aisha measured, in feet: $\frac{1}{2}$, 1, $\frac{3}{4}$, $\frac{1}{2}$, $\frac{3}{4}$, $\frac{3}{4}$, $1\frac{1}{4}$.



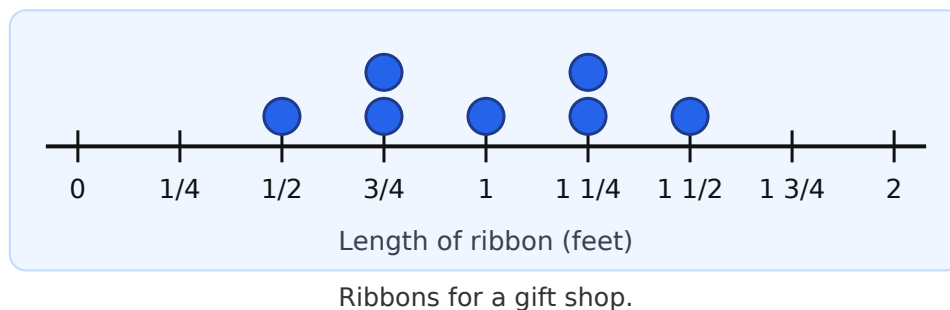
Problem 9: Longest minus shortest

Find how much longer the longest caterpillar is than the shortest caterpillar.



Problem 10: Adding two lengths

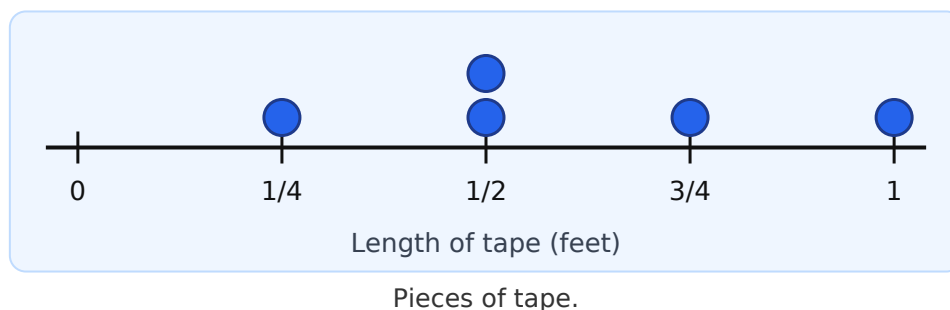
Use the line plot.



- Add the lengths of the longest and the shortest ribbon.
- Find the total length of two ribbons that are each $1\frac{1}{4}$ ft long when they are tied end to end.

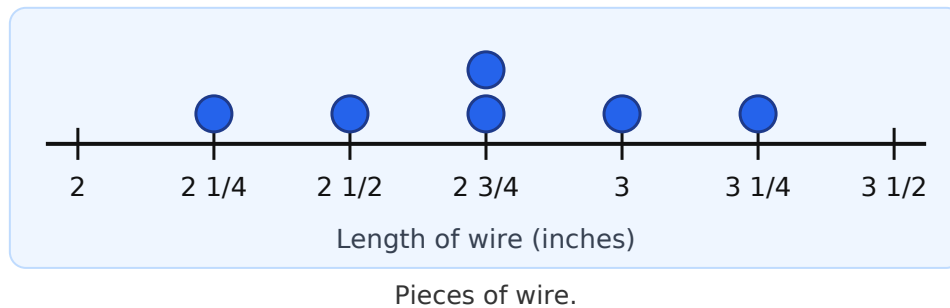
Problem 11: Total of all the pieces

Find the total length of all the pieces of tape on the line plot.



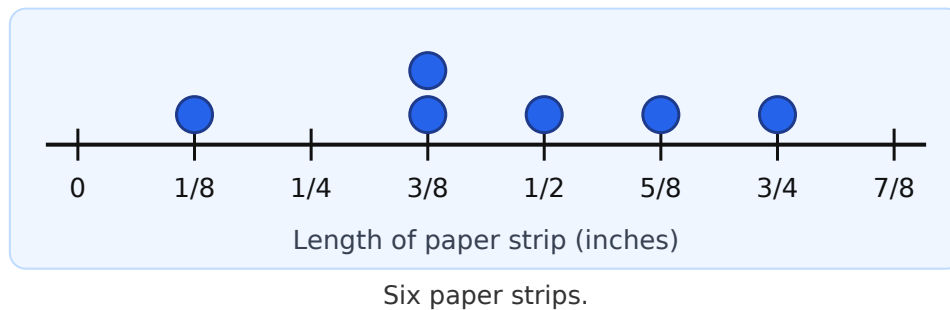
Problem 12: Subtracting with regrouping

Find how much longer the wire that measures 3 inches is than the wire that measures $2\frac{1}{4}$ in.



Problem 13: Adding eighths

Find the total length of the 6 paper strips.



Problem 14: Repeated addition

Find the total length of three pieces of ribbon that are each $\frac{3}{4}$ ft long.

Problem 15: Choosing a scale

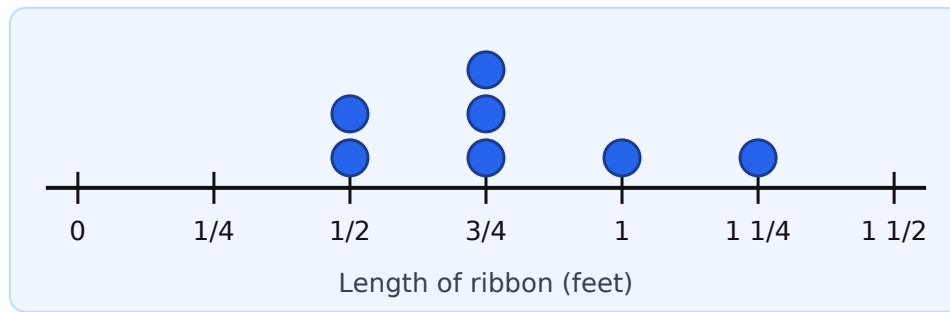
Decide which tick-mark spacing a number line should use for the measurements $\frac{1}{2}$, $\frac{3}{4}$, $1\frac{1}{4}$, $1\frac{1}{2}$ inches: halves, fourths, or eighths. Explain.

Problem 16: Find the missing count

Find the number of marks at $1\frac{1}{4}$ on a line plot that has 10 marks in all. There are 3 marks at $\frac{1}{2}$, 2 marks at $\frac{3}{4}$, and 4 marks at 1. The rest are at $1\frac{1}{4}$.

Problem 17: Ribbon for a banner

Use the line plot to solve. Aisha needs 2 feet of ribbon for a bake sale banner. She ties the three ribbons that measure $\frac{3}{4}$ ft end to end.

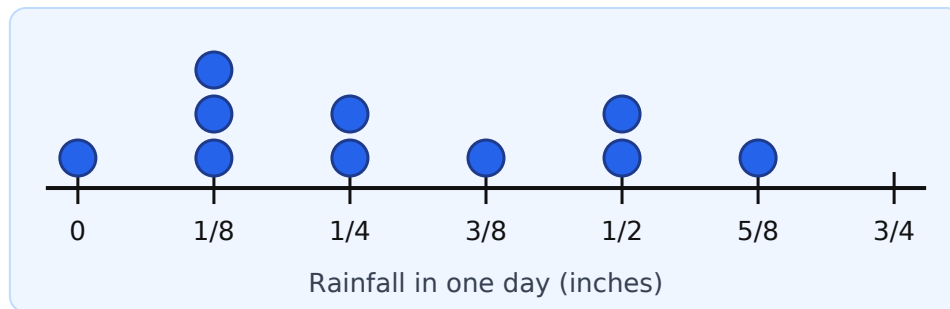


Ribbons at the bake sale.

- Find the length of the tied ribbon.
- Find how much longer it is than the 2 feet she needs.

Problem 18: Rainfall over 10 days

Use the line plot of rainfall on 10 days to answer each question.

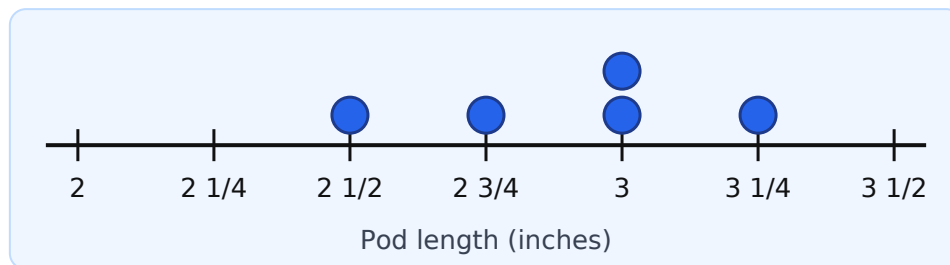


Rain gauge readings for 10 days.

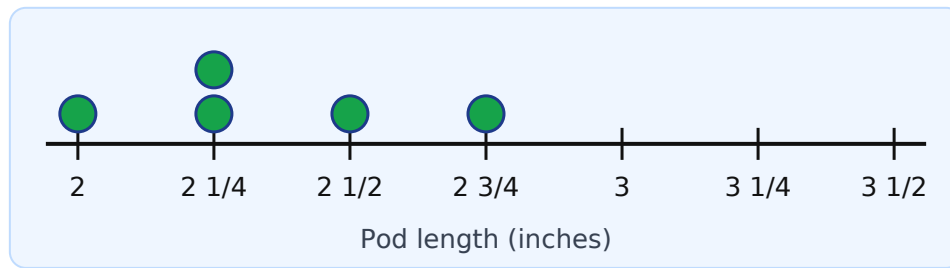
- Find how much rain fell in all on the days with $\frac{1}{8}$ in. of rain.
- Find how much more rain fell on the wettest day than on the driest day.
- Find how much rain fell on all 10 days.

Problem 19: Two garden plots

Use the two line plots of pods that Jamal and Mei measured in their garden.



Jamal's bean pods.

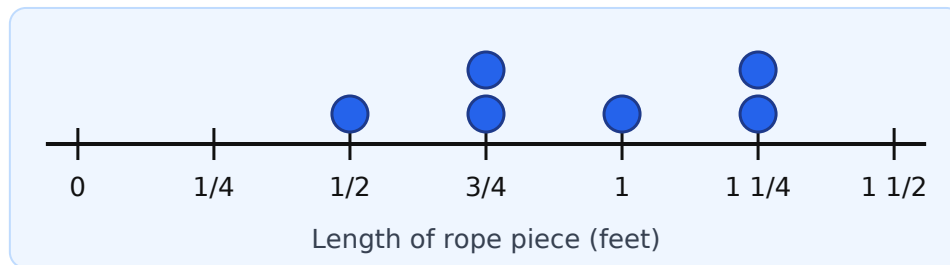


Mei's pea pods.

- Find how much longer Jamal's longest pod is than Mei's longest pod.
- Find the total length of Jamal's pods and of Mei's pods. Then find how much greater Jamal's total is.

Problem 20: Rope and a knot

Use the line plot. Jamal ties the two longest pieces and one 1 ft piece end to end. Ignore the knots.

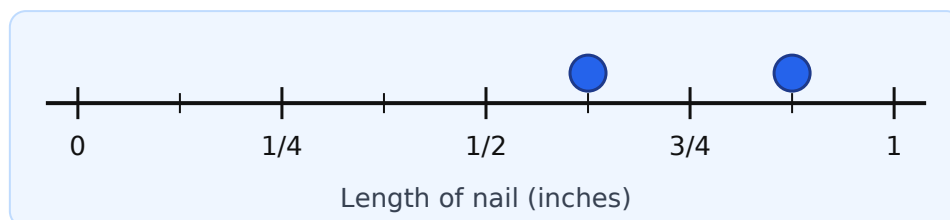


Pieces of rope Jamal cut.

- Find the total length.
- Find how much shorter this is than a 4 foot rope.

Problem 21: Find the mistake

Explain Noah's mistake and find the correct sum. He added the lengths of the two nails on the line plot and wrote $\frac{5}{8} + \frac{7}{8} = \frac{12}{16}$.



Two nails.

Problem 22: Make a plot and solve

Make a line plot with an eighths scale from 0 to 1 for the 7 seed lengths Sofia measured, in

inches: $\frac{1}{4}$, $\frac{3}{8}$, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{5}{8}$, $\frac{7}{8}$. Then find (a) the total length of the seeds and (b) how much longer the longest seed is than the shortest seed.