

Grade 5 - Line Plots and Data - Answer Key

Common Core 5.MD.B.2 · maths-pdf.fr/en/

Each answer shows how to read the plot, the fraction work, and the final answer with its unit. Compare your totals carefully, since one missed X changes the sum.

Grade 5 · Common Core State Standards: **5.MD.B.2**

Exercise 1 - Count the glasses

Count the X's: $1+3+3+1=8$.

8 glasses

Exercise 2 - Glasses with one half cup

Look above $\frac{1}{2}$. There are 3 X's.

3 glasses

Exercise 3 - More than one half cup

Count the X's above $\frac{3}{4}$ and above 1: $3+1=4$.

4 glasses

Exercise 4 - Greatest minus least

Greatest: 1 cup. Least: $\frac{1}{4}$ cup.

$$1 - \frac{1}{4} = \frac{3}{4}$$

$\frac{3}{4}$ cup

Exercise 5 - Total milk

$$1 \times \frac{1}{4} + 3 \times \frac{1}{2} + 3 \times \frac{3}{4} + 1 \times 1$$

$$= \frac{1}{4} + \frac{6}{4} + \frac{9}{4} + \frac{4}{4} = \frac{20}{4} = 5$$

$$1 \times \frac{1}{4} = \frac{1}{4}$$

$$3 \times \frac{1}{2} = 1 \frac{1}{2}$$

$$3 \times \frac{3}{4} = 2 \frac{1}{4}$$

$$1 \times 1 = 1$$

$$\text{Total} = \frac{1}{4} + 1 \frac{1}{2} + 2 \frac{1}{4} + 1 = 5$$

Multiply each measurement by its number of X's, then add.

5 cups

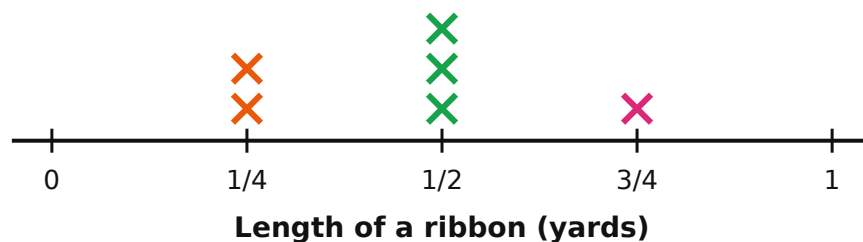
Exercise 6 - Milk shared equally

Total: 5 cups. Divide by 8: $5 \div 8 = \frac{5}{8}$.

$\frac{5}{8}$ cup

Exercise 7 - Make a line plot

Tally the data: $\frac{1}{4}$ appears 2 times, $\frac{1}{2}$ appears 3 times, $\frac{3}{4}$ appears 1 time.



Line plot. Each X is one measurement. Label: Length of a ribbon (yards).

2 X's above $\frac{1}{4}$, 3 above $\frac{1}{2}$, 1 above $\frac{3}{4}$; 6 X's in all

Exercise 8 - Seedlings taller than three eighths

Count X's above $\frac{1}{2}$ and $\frac{5}{8}$: $2+1=3$.

3 seedlings

Exercise 9 - Total growth

$$\frac{1}{8} + 2 \times \frac{2}{8} + 3 \times \frac{3}{8} + 2 \times \frac{4}{8} + \frac{5}{8} = \frac{1+4+9+8+5}{8} = \frac{27}{8}$$

$$\frac{27}{8} = 3\frac{3}{8}$$

$3\frac{3}{8}$ inches

Exercise 10 - Difference in growth

Greatest: $\frac{5}{8}$. Least: $\frac{1}{8}$.

$$\frac{5}{8} - \frac{1}{8} = \frac{4}{8} = \frac{1}{2}$$

$\frac{1}{2}$ inch

Exercise 11 - At least one half inch

“At least” includes $\frac{1}{2}$. Count the X's above $\frac{1}{2}$ and $\frac{5}{8}$: $2+1=3$.

3 seedlings

Exercise 12 - Short seedlings

Those are 1 seedling of $\frac{1}{8}$ and 2 seedlings of $\frac{1}{4}$.

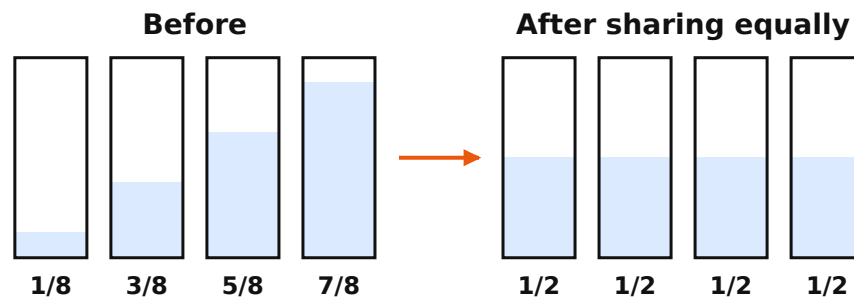
$$\frac{1}{8} + 2 \times \frac{1}{4} = \frac{1}{8} + \frac{4}{8} = \frac{5}{8}$$

$\frac{5}{8}$ inch

Exercise 13 - Level the trays

Total: $\frac{1+3+5+7}{8} = \frac{16}{8} = 2$ pounds.

Share: $2 \div 4 = \frac{1}{2}$.



Each tall box holds 1 pound when full.

$\frac{1}{2}$ pound each

Exercise 14 - Trail mix swap

Total: $\frac{2}{4} + \frac{3}{4} + \frac{1}{4} = \frac{6}{4} = \frac{3}{2}$ pounds.

Share among 3: $\frac{3}{2} \div 3 = \frac{1}{2}$ pound each.

Liam has $\frac{3}{4}$ and keeps $\frac{1}{2}$, so he gives away $\frac{3}{4} - \frac{2}{4} = \frac{1}{4}$ pound.

$\frac{1}{2}$ pound each; Liam gives away $\frac{1}{4}$ pound

Exercise 15 - Apples at the farmers market

(a) $1\frac{1}{2} - \frac{1}{2} = 1$ pound.

(b) $2 \times \frac{1}{2} + 3 \times \frac{3}{4} + 3 \times 1 + \frac{5}{4} + \frac{3}{2} = 1 + \frac{9}{4} + 3 + \frac{5}{4} + \frac{3}{2} = 9$ pounds.

$2 \times \frac{1}{2} = 1$
$3 \times \frac{3}{4} = 2 \frac{1}{4}$
$3 \times 1 = 3$
$1 \times 1 \frac{1}{4} = 1 \frac{1}{4}$
$1 \times 1 \frac{1}{2} = 1 \frac{1}{2}$
Total = $1 + 2 \frac{1}{4} + 3 + 1 \frac{1}{4} + 1 \frac{1}{2} = 9$

Multiply each measurement by its number of X's, then add.

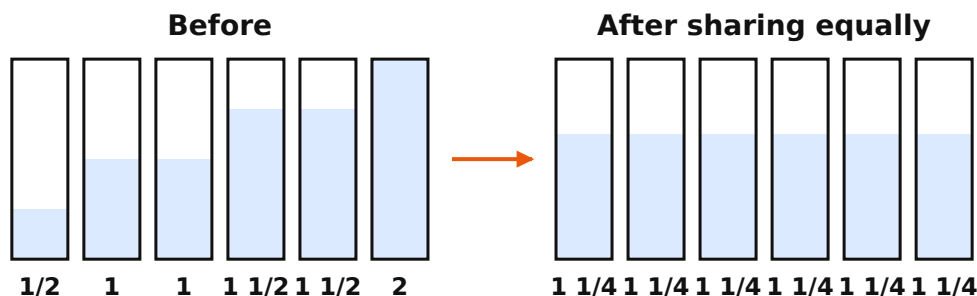
(c) $9 \times 2 = 18$ dollars.

(a) 1 pound; (b) 9 pounds; (c) \$18

Exercise 16 - Water coolers

Total: $\frac{1}{2} + 2 \times 1 + 2 \times \frac{3}{2} + 2 = \frac{1}{2} + 2 + 3 + 2 = 7\frac{1}{2}$ gallons.

Share: $7\frac{1}{2} \div 6 = \frac{15}{2} \div 6 = \frac{15}{12} = 1\frac{1}{4}$.



Each tall box holds 2 gallon when full.

$1\frac{1}{4}$ gallons each

Exercise 17 - Pitchers of lemonade

Total: $\frac{2}{4} + \frac{3}{4} + \frac{3}{4} + \frac{4}{4} = \frac{12}{4} = 3$ quarts.

$3 \div 4 = \frac{3}{4}$.

$\frac{3}{4}$ quart each

Exercise 18 - Bean sprouts

(a) 2 sprouts (the two at $\frac{3}{8}$).

(b) $3 \times \frac{1}{2} = 1\frac{1}{2}$ inches.

(c) $2 \times \frac{3}{8} + 3 \times \frac{4}{8} + 2 \times \frac{5}{8} + \frac{6}{8} = \frac{6+12+10+6}{8} = \frac{34}{8} = 4\frac{1}{4}$ inches.

(a) 2 sprouts; (b) $1\frac{1}{2}$ in; (c) $4\frac{1}{4}$ in

Exercise 19 - Saturday bike rides

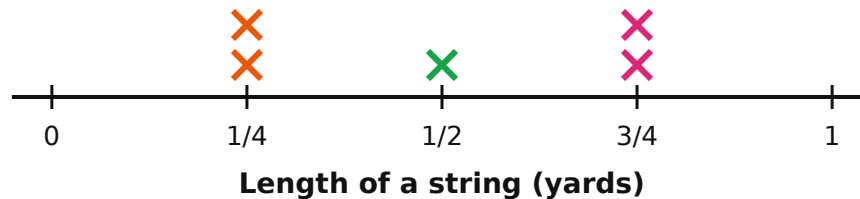
Total: $2 \times \frac{1}{2} + 3 \times \frac{3}{4} + 1 + \frac{5}{4} = 1 + \frac{9}{4} + 1 + \frac{5}{4} = 5\frac{1}{2}$ miles.

$$8 - 5\frac{1}{2} = 2\frac{1}{2}.$$

$2\frac{1}{2}$ miles

Exercise 20 - String for crafts

(a) Plot 2 X's above $\frac{1}{4}$, 1 above $\frac{1}{2}$, 2 above $\frac{3}{4}$.



Line plot. Each X is one measurement. Label: Length of a string (yards).

(b) $2 \times \frac{1}{4} + \frac{1}{2} + 2 \times \frac{3}{4} = \frac{1}{2} + \frac{1}{2} + \frac{3}{2} = 2\frac{1}{2}$ yards.

(c) $4 - 2\frac{1}{2} = 1\frac{1}{2}$ yards.

(b) $2\frac{1}{2}$ yd; (c) $1\frac{1}{2}$ yd