



4th
Basic

5th
Advanced

Helping With Math

USA
GRADES

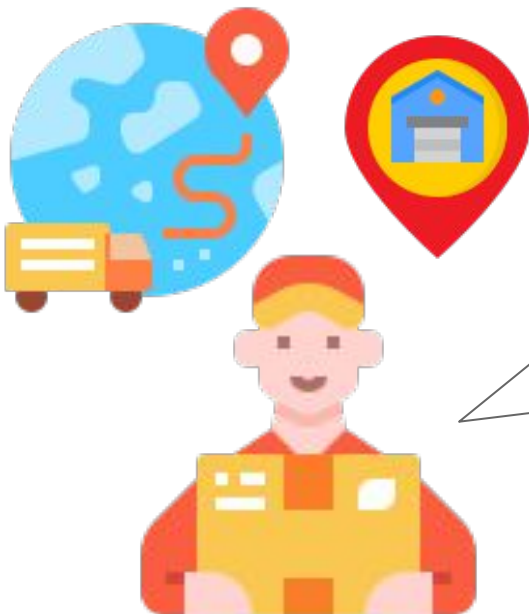
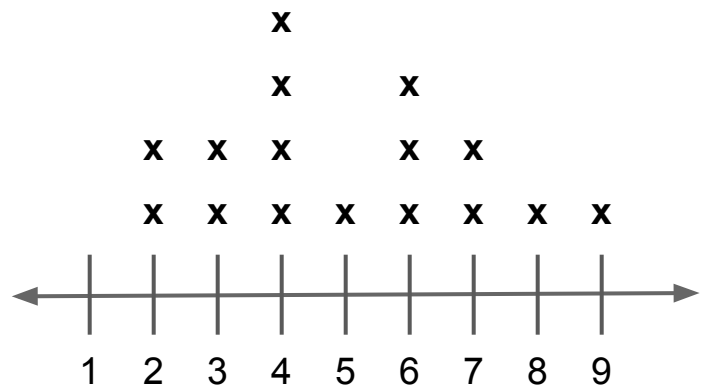
Line Plots

Suitable for students
aged 8-10



This pack is suitable for learners aged 8-10 years old or 4th to 5th graders (USA). The content covers fact files and relevant basic and advanced activities involving line plots.

A line plot can be defined as a graph that displays data as points or check marks above a number line, showing how many times each value occurred.

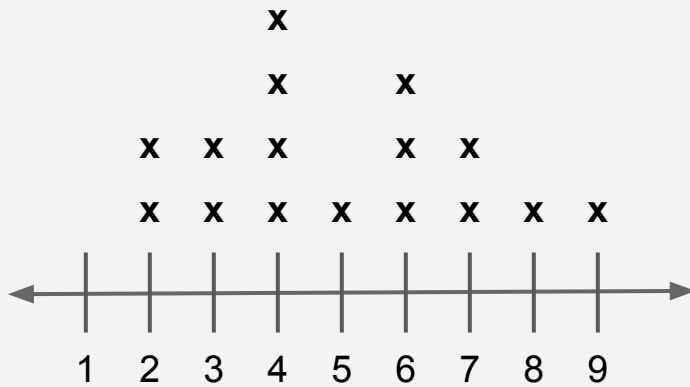


The figure above is the line plot representation of the given table of values on the next page. Numbers are written on the number line and the marks are the frequencies.



LINE PLOTS

- Line plots are used to project data in a more comprehensive manner. It is a visual representation of the data being discussed.
- It is usually composed of horizontal number line and marks or dots to represent the frequency of each value or data.



Number	Frequency
1	0
2	2
3	2
4	4
5	1
6	3
7	2
8	1
9	1

The figure on the left is the line plot representation of the given table of values on the right. Numbers are written on the number line and the marks are the frequencies.

Let us now create a line plot with fractions.



Weight of the parcel	$5 \frac{1}{3}$	$5 \frac{2}{3}$	6	$6 \frac{1}{3}$
Frequency	4	2	3	5



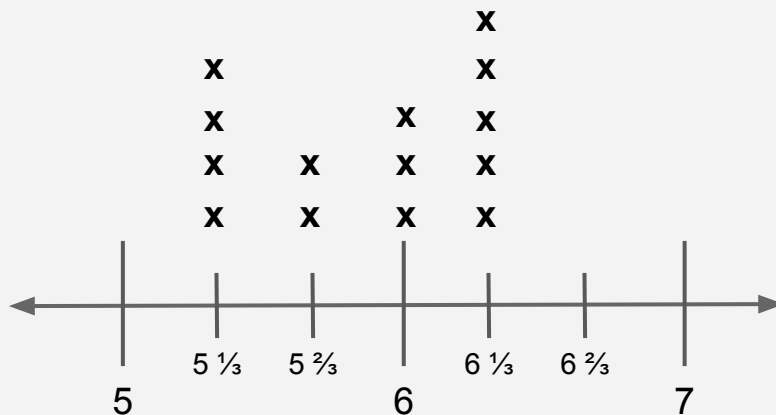
CREATING LINE PLOTS

To create a line plot,

- Make sure to gather your data.
- Organize your data in increasing order.
- Create a horizontal number line.
- Mark an "X" above the horizontal line every time the data occurs.
- Interpret the data.



Weight of the parcel	$5 \frac{1}{3}$	$5 \frac{2}{3}$	6	$6 \frac{1}{3}$
Frequency	4	2	3	5



Note:
Divide one unit into thirds since the weight of the vegetables is expressed in thirds.

INTERPRETATION:

- The weight of the parcels is ranging from $5 \frac{1}{3}$ lbs up to $6 \frac{1}{3}$ lbs.
- The lowest weight is $5 \frac{1}{3}$ lbs and the heaviest is $6 \frac{1}{3}$ lbs.
- The weight with the highest frequency is $6 \frac{1}{3}$ lbs.
- There are 14 parcels in total because the sum of the frequency is 14.



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7	Logistics Employees	
8	Youngest to Eldest	
9	Cargo Weight	
10	Logistics Say	



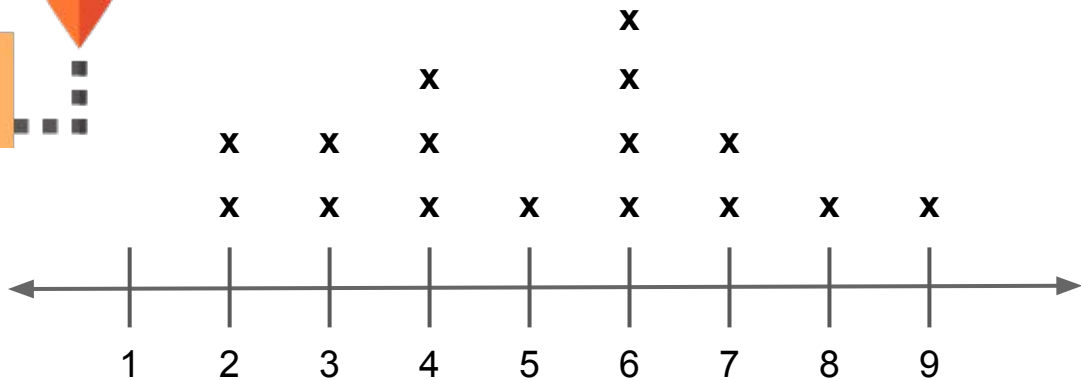
LOGISTICS TASK

G4
Basic

George is working in a logistics company. One day he was given an inventory report in a form of line plot. The line plot is given below. Help George answer the related questions.



Line Plot of Number of Parcel Delivered in Nine Days



1. How many parcels were delivered on the 4th day?
2. Compare the number of parcels delivered during the 2nd, 3rd, and 7th day.
3. Which day has the most number of parcels delivered?
4. How many parcels were delivered in total in nine days?



PARCEL INVENTORY

G4
Basic

Inventory is very important to track the amount of work that is made in a day. Refer to the logistics data below and represent the quantities in line plot.

Weight of the parcel in kg	Frequency
1	6
2	4
3	7
4	2
5	0
6	1

Write a short description/observation of the data here.



Line plot



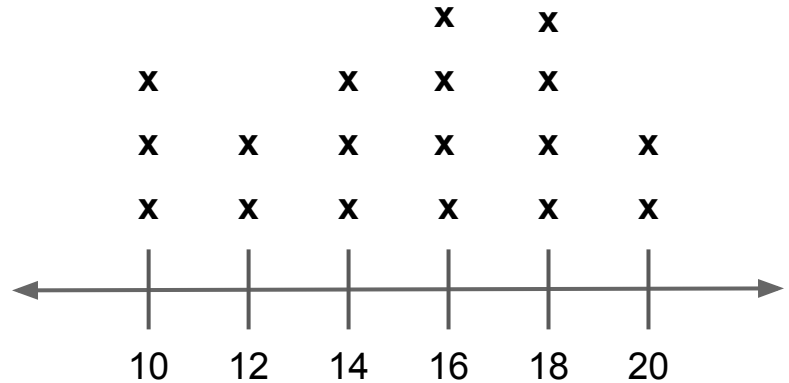
QUANTITY CHECKING

G4
Basic

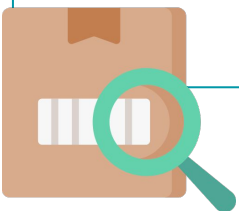
George would like to do a quantity check on their logistics company. His task is to check if the tally and the line plot represent each other correctly. Help him find out the answer.

Weight of the parcel in kg	Frequency
10	3
12	3
14	3
16	4
18	5
20	2

Line Plot of the Weight of Each Parcel in kg



1. Are there any inconsistencies on the line plot based on the table given? If there are, what are these? How will it be corrected?
2. Write an interpretation of the table and line plot.



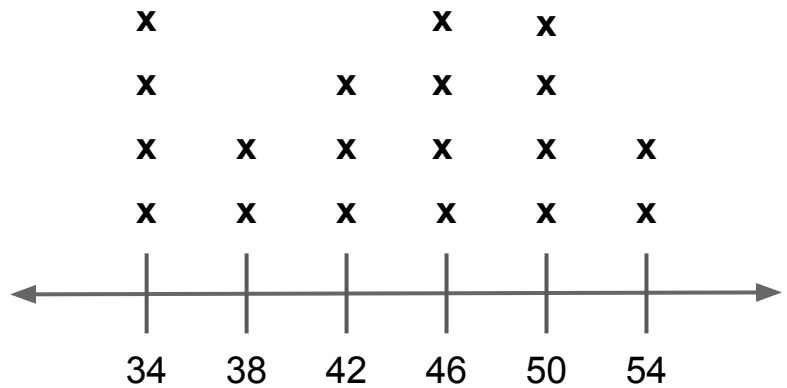
COMPLETE ME

G4
Basic

Refer to each line plot. Complete the details of the table to make a comprehensive report of the logistics office.

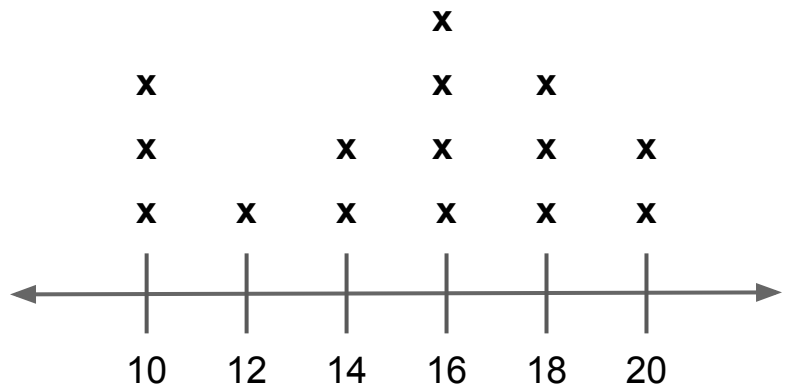
Weight of the parcel in lbs	Frequency (each x is equal to 2)
34	
	6
54	4

Line Plot of the Weight of Each Parcel in lbs



Weight of the parcel in lbs	Frequency (each x is equal to 2)
	6
14	
	8

Line Plot of the Weight of Each Parcel in lbs



HALF AND HALF

G4
Basic

Listed below are the different lengths of some cargo boxes. Represent these measurement as line plot with $\frac{1}{2}$ units.

Length of Cargo Boxes in cm				
$20 \frac{1}{2}$	21	$20 \frac{1}{2}$	$21 \frac{1}{2}$	$19 \frac{1}{2}$
21	21	19	$20 \frac{1}{2}$	$19 \frac{1}{2}$
20	20	$20 \frac{1}{2}$	21	$20 \frac{1}{2}$



QUARTER TASK

G5
Advanced

For today's delivery, the cargo boxes' weights are in $\frac{1}{4}$ units. Create a line plot to organize the given set of data.

Area for creating a line plot.



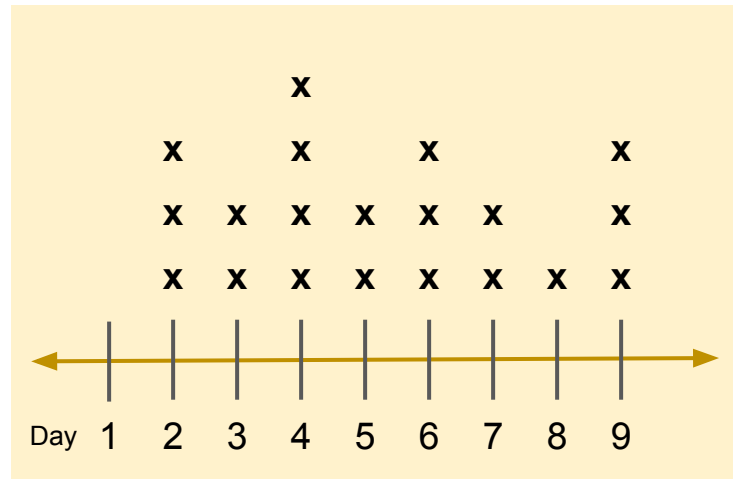
85 $\frac{1}{4}$ 85 $\frac{1}{4}$ 85 $\frac{3}{4}$
84 $\frac{3}{4}$ 84 $\frac{1}{4}$ 85 84 $\frac{1}{4}$
84 $\frac{3}{4}$ 84 $\frac{1}{4}$ 85 84 $\frac{1}{4}$ 85 $\frac{3}{4}$
84 $\frac{3}{4}$ 84 $\frac{1}{4}$ 85 84 $\frac{1}{4}$
85 $\frac{1}{4}$ 85 $\frac{1}{4}$ 85 $\frac{3}{4}$



LOGISTICS EMPLOYEES

G5
Advanced

The line plot below shows the number of newly hired employees in 9 days. Answer the following given.



1. The total number of new employees is _____. Show your solution below.

2. What is the difference/gap of the highest value and the lowest value?

3. Which values have the same frequency?

4. Write a 2-3 sentence interpretation of the line plot.



YOUNGEST TO ELDEST

G5
Advanced

Refer to the details below represented using a line plot. Then answer the questions about the employees' age.

1. What is the age of the youngest employee?

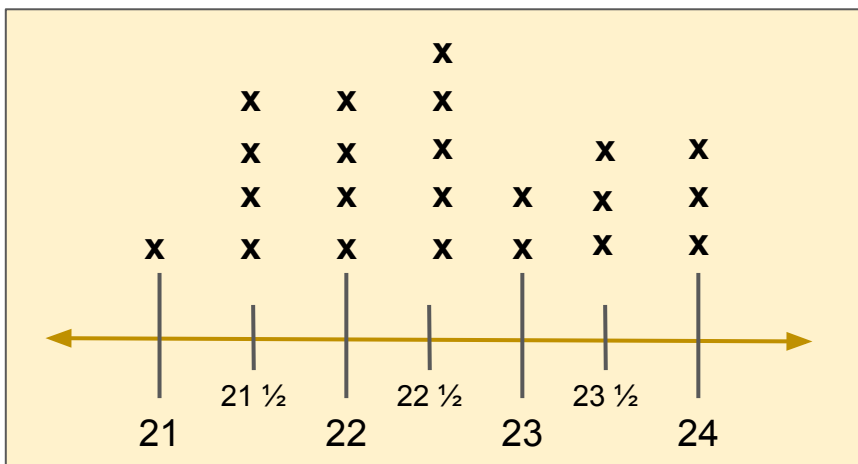
2. What age has the highest frequency?

3. Which two age categories have the same frequency?

4. How many employees are the oldest in the group?

5. How many employees are the youngest in the group?

6. How many employees have $\frac{1}{2}$ units on their age?



The Age of the
Logistics Employees

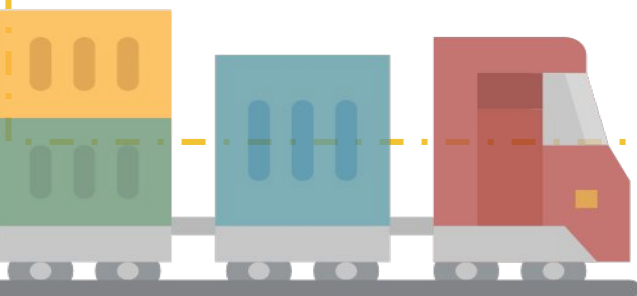


CARGO WEIGHT

G5
Advanced

Create a line plot and interpret the weight of the cargo packs below.

Pack's weight in kg	45	$45 \frac{1}{4}$	$46 \frac{1}{2}$	$47 \frac{1}{4}$	$48 \frac{1}{4}$	$48 \frac{3}{4}$
Frequency	5	8	6	5	2	6



This time, let's work on some essay questions about our lesson. You may write 3-5 sentences as your answer.

1. What are the steps in creating line plots?

2. Why do you think line plot is important to learn in life?

3. What are the benefits of using line plots in creating inventory, most especially in the field of logistics?



ANSWER GUIDE

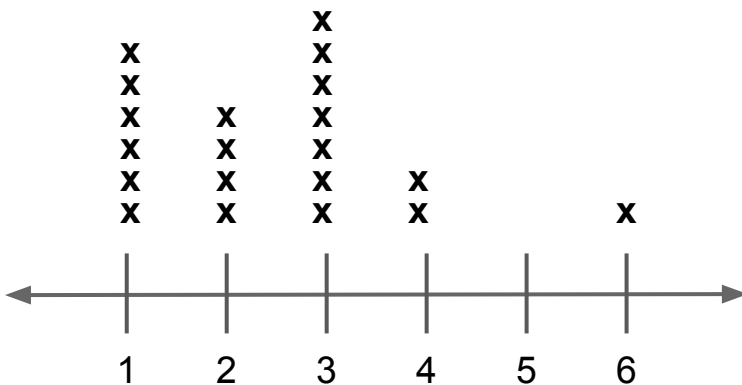
Activity 1

1. Three (3) parcels
2. The number of parcels delivered on the 2nd, 3rd, and 7th day are two. These are all the same.
3. 6th day
4. 16 parcels

Activity 2

Interpretation:

There are 20 parcels in all. The heaviest parcel has 1 quantity and the lightest parcel has 6. The most numbered parcel has a weight of 3 kg.



Activity 3

1. There are inconsistencies with the table and line plot. 12 must have a frequency of 3, 18 must only have 4.
2. The 10-kg, 12-kg, and 14-kg parcels have the same frequencies. The 18-kg parcels have the highest frequency while the 20-kg parcels have frequency of 2.



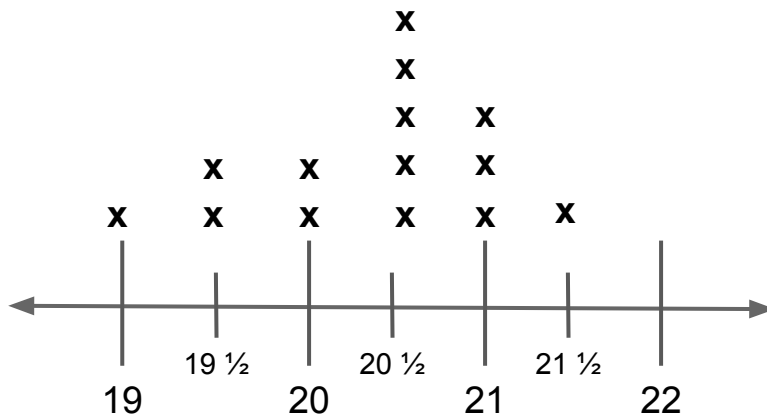
ANSWER GUIDE

Activity 4

Weight of the parcel in lbs	Frequency (each x is equal to 2)
34	8
38	4
42	6
46	8
50	8
54	4

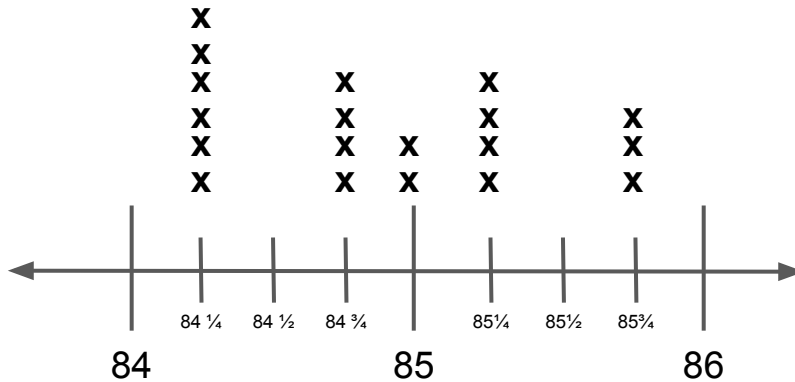
Weight of the parcel in lbs	Frequency (each x is equal to 2)
10	6
12	2
14	4
16	8
18	6
20	4

Activity 5



ANSWER GUIDE

Activity 6



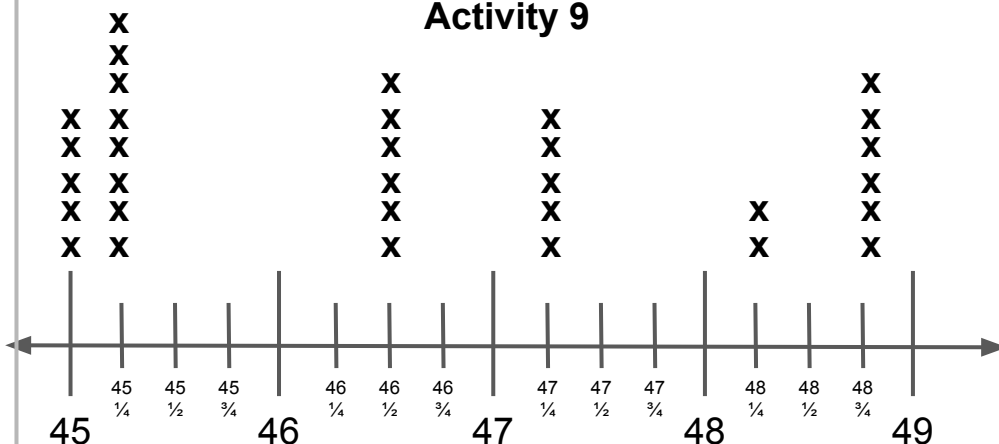
Activity 7

- 20 new employees in total
- $4 - 1 = 3$
- 2, 6, and 9 have the same frequency of 3. 3, 5, 7 have frequency of 2.
- There are 20 new employees. The day with the highest number of hired employees is day 4 which is on contrast with day 8.

Activity 8

- 21
- $22 \frac{1}{2}$
- $21 \frac{1}{2}$ and 22; $23 \frac{1}{2}$ and 24.
- 3
- 1
- 12

Activity 9



Activity 10

Answers may vary.



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