



Grade 3- Dot Plot and Frequency Tables

3(8)(A) **Data analysis.** The student applies mathematical process standards to solve problems by collecting, organizing, displaying, and interpreting data. The student is expected to summarize a data set with multiple categories using a frequency table, dot plot, pictograph, or bar graph with scaled intervals.

3(8)(B) **Data analysis.** The student applies mathematical process standards to solve problems by collecting, organizing, displaying, and interpreting data. The student is expected to solve one- and two-step problems using categorical data represented with a frequency table, dot plot, pictograph, or bar graph with scaled intervals.

Materials:

- **Dot Plot Task Card**
- **Sticky Dot Plot**
- Colored Pencils
- Colored Sticky Dots

Dot Plot Task Card

The data represents the favorite color chosen by students in Mrs. Brennan's homeroom class. Color each row of the frequency table below according to the identified color.

Favorite Color	Frequency
Red	IIII
Green	IIII I
Blue	II
Yellow	III

- Write the number of tally marks shown in each row next to the tally marks in the frequency column of the table.
- Create your dot plot on **Sticky Dot Plot**.

Use your completed **Sticky Dot Plot** to answer the questions below.

1. How many more students chose green than chose blue and yellow combined?
2. How many students did not choose red?
3. If two of the students who chose green are girls, what fraction of students who chose green are girls?
4. Suppose 8 more students are surveyed and an equal number of the 8 students chose each color. Based on the new data, how many students chose blue?

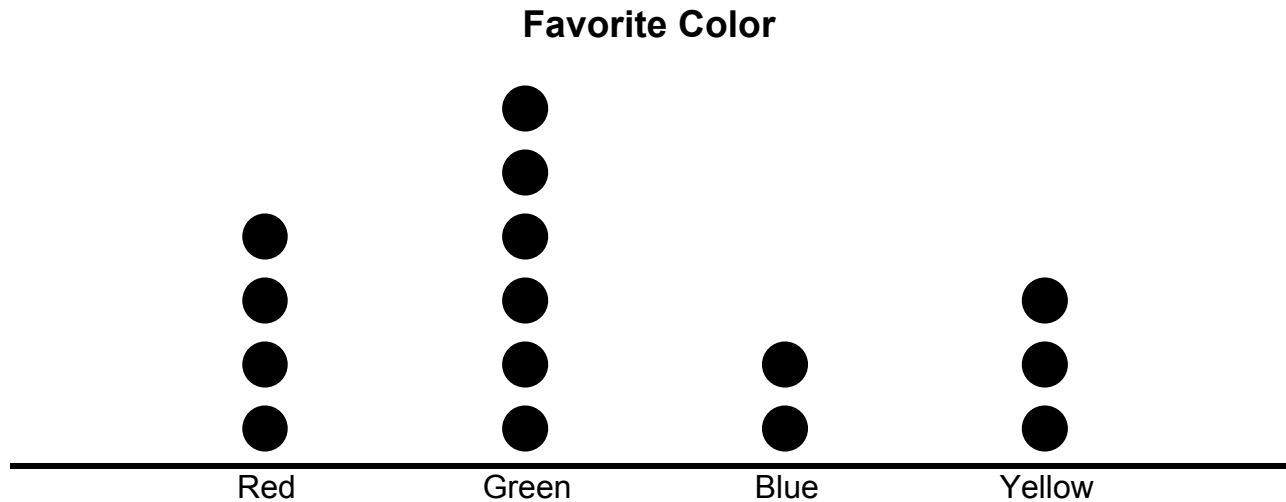


Sticky Dot Plot


Place the appropriate number and color of sticky dots above each label to represent the number of students choosing each color. Remember to give your dot plot a title.



Answer key:



1. How many more students chose green than chose blue and yellow combined? **1**
2. How many students did **NOT** choose red? **11**
3. If two of the students who chose green are girls, what fraction of students who chose green are girls? $\frac{2}{6}$
4. Suppose 8 more students are surveyed and an equal number of the 8 students chose each color. Based on the new data, how many students chose blue? **4**



Grade 4- Stem and Leaf Plots

4(9)(A) **Data analysis.** The student applies mathematical process standards to solve problems by collecting, organizing, displaying, and interpreting data. The student is expected to represent data on a frequency table, dot plot, or stem and leaf plot marked with whole numbers and fractions.

Materials:

- **Stem and Leaf Task Card**
- **Stem and Leaf Plot**
- **Stem and Leaf Cards**
- Scissors
- Tape or glue

Stem and Leaf Task Card

The data below represents the number of baseball games each team won last season.

Tigers	35	Astros	81
Sharks	84	Bears	88
Giants	75	Mustangs	90
Rangers	62	Eagles	91
Blue Jays	81	Hawks	38
Red Sox	92	Cheetahs	54
Super Stars	86	Gazelles	55

Follow the steps below to create a stem and leaf plot of the data. Check the boxes as you complete each step:

- Record each piece of data on a **Stem and Leaf Card** as shown below.

Tigers

Stem (Number of tens)	Leaf (Number of ones)
3	5

- Cut along the dotted lines keeping each stem attached to its leaf.
- Sort the cards according to the stems and place each stack of cards in order from the least stem to the greatest stem.
- Write the stems in order in the “Stem” column of the **Stem and Leaf Plot**.
- Cut each stem and leaf card apart. Keep each leaf in the row that matches its stem.
- Arrange the leaves in each row in order from least to greatest.
- Glue or tape the leaves into place on the **Stem and Leaf Plot**.

Use your completed **Stem and Leaf Plot** to answer the questions below.

1. What is the difference between the fewest number of games won last season and the greatest number of games won last season?
2. How many teams won fewer than 70 games last season?
3. How many teams won exactly 81 games?



Stem and Leaf Plot

Games Won Last Season

Stem	Leaf				

9 | 7 means 97

Stem and Leaf Cards

Cut along the dotted lines.

Stem (Number of tens)	Leaf (Number of ones)
------------------------------------	------------------------------------

Stem (Number of tens)	Leaf (Number of ones)
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Stem (Number of tens)	Leaf (Number of ones)
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Stem (Number of tens)	Leaf (Number of ones)
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Stem (Number of tens)	Leaf (Number of ones)
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Stem (Number of tens)	Leaf (Number of ones)
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Stem (Number of tens)	Leaf (Number of ones)
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Stem (Number of tens)	Leaf (Number of ones)
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Stem (Number of tens)	Leaf (Number of ones)
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Stem (Number of tens)	Leaf (Number of ones)
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Stem (Number of tens)	Leaf (Number of ones)
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Stem (Number of tens)	Leaf (Number of ones)
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Answer key:

Games Won Last Season

Stem	Leaf				
3	5	8			
4					
5	4	5			
6	2				
7	5				
8	1	1	4	6	8
9	0	1	2		

1. What is the difference between the fewest number of games won last season and the greatest number of games won last season? **57**
2. How many teams won fewer than 70 games last season? **5**
3. How many teams won exactly 81 games? **2**



Grade 5- Scatterplots

5(9)(B) **Data analysis.** The student applies mathematical process standards to solve problems by collecting, organizing, displaying, and interpreting data. The student is expected to represent discrete paired data on a scatterplot.

5(9)(C) **Data analysis.** The student applies mathematical process standards to solve problems by collecting, organizing, displaying, and interpreting data. The student is expected to solve one- and two-step problems using data from a frequency table, dot plot, bar graph, stem-and-leaf plot, or scatterplot.

Materials:

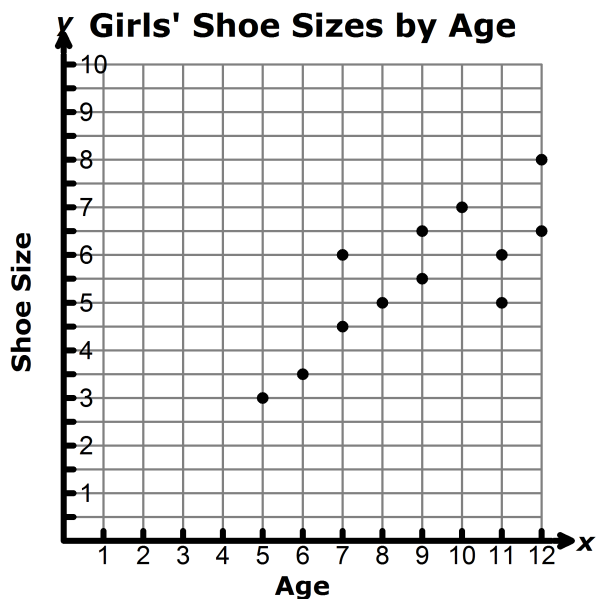
- **Scatterplot Task Card**
- **Scatterplot Questions**

Scatterplot Task Card

The tables below show data collected about girls' age and shoe size.

Girls' Shoe Sizes by Age

Girl's Age	Shoe Size
10	7
12	6.5
8	5
7	4.5
11	6
7	6
9	5.5
12	8
11	5
9	6.5
5	3
6	3.5

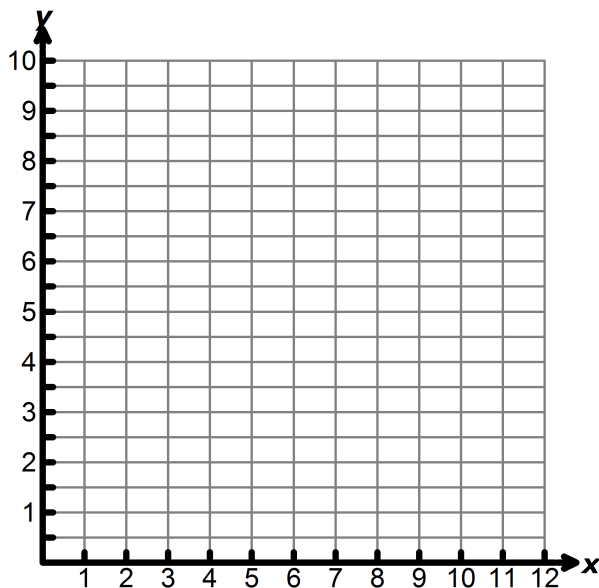


Use the data from the table below to complete a scatterplot showing boys' age related to shoe size.

- Plot each point in the table on the graph.
- Title and label the graph appropriately.

Boys' Shoe Sizes by Age

Boys' Age	Shoe Size
10	7
11	9
7	4.5
12	9.5
9	6
10	8
7	3.5
8	5
10	8.5
11	10

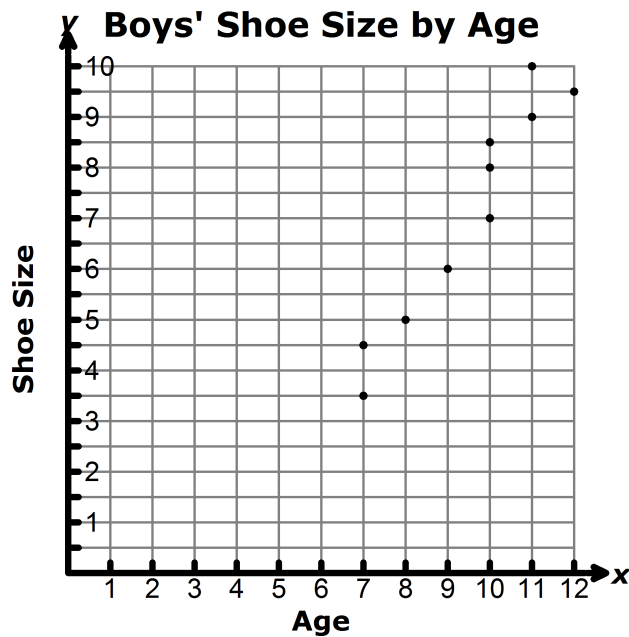




Scatterplot Questions

1. How many boys have a shoe size less than 6?
2. What fraction of girls has a shoe size more than 4.5?
3. What is the difference in the number of boys that have a shoe size greater than 6 and the number of girls that have a shoe size greater than 6?
4. Write a question that could be answered using one or both of the scatterplots from **Scatterplot Task Card**. Include the correct answer for your question.

Answer key:



1. How many boys have a shoe size less than 6? **3**
2. What fraction of girls has a shoe size more than 4.5? $\frac{9}{12} = \frac{3}{4}$
3. What is the difference in the number of boys that have a shoe size greater than 6 and the number of girls that have a shoe size greater than 6? **2**
4. Write a question that could be answered using one or both of the scatterplots from **Scatterplot Task Card**. Include the correct answer for your question.
Answers may vary.