Math Virtual Learning

6th Grade Math

Understand the difference between categorical and numerical data.

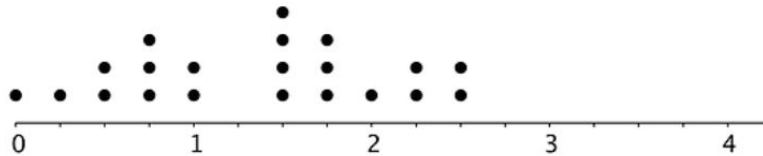May 5, 2020

6th Grade Math
Lesson: May 5, 2020

Objective/Learning Target:

Students will understand the difference between categorical and numerical data, and understand how to correctly collect data to answer a question.

Daily Warm Up

Here is a **dot plot** for a data set.

1. Determine if each of the following would be an appropriate label to represent the data in the dot plot. Be prepared to explain your reasoning.

   a. Number of children per class.

   b. Distance between home and school, in miles.

   c. Hours spent watching TV each day.

   d. Weight of elephants, in pounds.

   e. Points received on a homework assignment.

Daily Warm Up Answers

1. Reasoning varies. Sample responses:

   a. No. We cannot have partial children.

   b. Yes. The distances are reasonable for the context and can be fractional.

   c. Yes. The hours are reasonable for the context and can be fractional.

   d. No. The unit of measurement (pounds) does not work with the context. Elephants weigh much more than several pounds.

   e. Yes. A teacher could grade a homework assignment on a scale of 1 to 4 and assign partial points.

Lessons

There are different types of data:

Numerical Data (quantitative): Measurements of quantities.

Categorical Data (qualitative): Measurements of non-quantities but can be sorted into categories.

[Khan Academy](Khan%20Academy)

On the next page, please list if each question would give you categorical or numerical data.

Practice

1. How long does it usually take you to travel to school? Answer to the nearest minute

2. How do you travel to school on most days? Choose one.
   a. Walk
   b. Bike
   c. Scooter or skateboard
   d. Car
   e. School Bus

3. How important are the following issues to you? Rate each on a scale from 0 (not important) to 10 (very important).
   a. Reducing Pollution
   b. Recycling
   c. Conserving Water

4. Do you have any siblings? _____ Yes _____ No

5. How many hours of sleep per night do you usually get when you have school the next day? Answer to the nearest half hour.

6. How many hours of sleep per night do you usually get when you do not have school the next day? Answer to the nearest half hour.

1. How long does it usually take you to travel to school? Answer to the nearest minute	**Numerical Data**
2. How do you travel to school on most days? Choose one.	a. Walk b. Bike c. Scooter or skateboard **Categorical Data** d. Car e. School Bus f. Other
3. How important are the following issues to you? Rate each on a scale from 0 (not important) to 10 (very important).	a. Reducing Pollution b. Recycling **Numerical Data** c. Conserving Water
4. Do you have any siblings?	_____ Yes _____ No **Categorical Data**
5. How many hours of sleep per night do you usually get when you have school the next day? Answer to the nearest half hour.	**Numerical Data**
6. How many hours of sleep per night do you usually get when you do not have school the next day? Answer to the nearest half hour.	**Numerical Data**

Practice

10. Other than traveling from school, what do you do right after school on most days?

- Have a snack
- Do homework
- Read a book
- Talk on the phone

- Practice a sport
- Do chores
- Use the computer
- Participate in an extracurricular activity

11. If you could meet one of these celebrities, who would you choose?

- A city or state leader
- A champion athlete
- A movie star

- A musical artist
- A best-selling author

12. Estimate how much time per week you usually spend on each of these activities. Answer to the nearest quarter of an hour.

a. Playing sports or doing outdoor activities

b. Using a screen for fun (watching TV, playing computer games, etc.)

c. Doing homework

d. Reading

Practice Answers

Categorical Data

10. Other than traveling from school, what do you do right after school on most days?

- Have a snack
- Do homework
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Categorical Data

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Numerical Data

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c. Doing homework

d. Reading

Summary/Reflection

Where do you see numerical and categorical data in your daily life?

Additional Practice:

Click on the link below to get additional practice and to check your understanding!

Practice:

[Practice Problems](#)

[Khan Academy Practice](#)