



# Math Virtual Learning

## 6th Grade Math

Understand statistical questions

May 6, 2020



## 6th Grade Math Lesson: May 6, 2020

### **Objective/Learning Target:**

Students will recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers.

# Daily Warm-up

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

**Would these questions give you numerical or categorical data?**

# Daily Warm-up Answers

## Categorical Data

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

## Categorical Data

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

## Numerical Data

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

**Lesson Video**

[Khan Lesson](#)

# Practice

Sort these questions into the categories of statistical and non-statistical questions.

<b>A. What fraction of the people in your school wear glasses?</b>	<b>B. How many centimeters tall is the door of your classroom?</b>	<b>C. What percentage of students in your class say they like dogs better than cats?</b>
<b>D. What is the average age of teachers at your school?</b>	<b>E. What do students in your class prefer to have on a hotdog: ketchup, mustard, both ketchup and mustard, or neither?</b>	<b>F. What is a typical number of students per class in your school?</b>
<b>G. Who is the current Vice President of the United States?</b>	<b>H. How old is the principal at your school?</b>	<b>I. What is the most common favorite color for the students in your class?</b>
<b>J. Do students at your school generally get more sleep on school nights than on weekends and holidays?</b>	<b>K. Who is the oldest staff member at the school?</b>	<b>L. What day of the week is today?</b>

# Practice Answers

**Statistical**

A, C, D, E, F, I, J, K

**Non-Statistical**

B, G, H, L

# Practice

## Statistical and non statistical questions

Examples:

Which of the following are statistical questions?

- How old are the people who have watched this video in 2013?
  - Do dogs run faster than cats?
  - Do wolves weigh more than dogs?
  - Does your dog weigh more than that wolf?
  - Does it rain more in Seattle than Singapore?
  - What was the difference in rainfall between Singapore and Seattle in 2013?
  - In general, will I use less gas driving at 55 mph than 70 mph?
  - Do English professors get paid less than math professors?
  - Does the most highly paid English professor at Harvard get paid more than the most highly paid math professor in MIT?
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# Practice Answers

## Statistical and non statistical questions

Examples:

Which of the following are statistical questions?

- How old are the people who have watched this video in 2013? **Statistical**
  - Do dogs run faster than cats? **Non Statistical**
  - Do wolves weigh more than dogs? **Non Statistical**
  - Does your dog weigh more than that wolf? **Non Statistical**
  - Does it rain more in Seattle than Singapore? **Non Statistical**
  - What was the difference in rainfall between Singapore and Seattle in 2013? **Statistical**
  - In general, will I use less gas driving at 55 mph than 70 mph? **Statistical**
  - Do English professors get paid less than math professors? **Statistical**
  - Does the most highly paid English professor at Harvard get paid more than the most highly paid math professor in MIT? **Statistical**
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# Summary/Reflection

Differentiate a statistical vs nonstatistical question and provide two examples of each.

## **Additional Practice:**

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

**Practice:**

[Khan Practice](#)

[Illustrative Math Practice Problems](#)