

SC7N1.1: Qualitative and Quantitative data

Qualitative observations use your senses to observe the results. (Sight, smell, touch, taste and hear.)

Quantitative observations are made with instruments such as rulers, balances, graduated cylinders, beakers, and thermometers. These results are measurable.

Read the following examples and then decide if the example is qualitative (1) or quantitative (2).

1. It is light green in color. _____ (1 or 2)
2. It taste sour. _____ (1 or 2)
3. One leaf is 9 cm long. _____ (1 or 2)
4. It makes a loud pop sound. _____ (1 or 2)
5. The mass of the computer is 1 1/2 kg. _____ (1 or 2)
6. It smells sweet. _____ (1 or 2)
7. The temperature of the room increases by 8 degrees C. _____ (1 or 2)
8. It gets darker over a period of time. _____ (1 or 2)
9. The flower clusters in 3 blooms. _____ (1 or 2)
10. Feels very rough. _____ (1 or 2)
11. The plant is short. _____ (1 or 2)
12. Leaves are stiff. _____ (1 or 2)
13. The veins are 3 mm wide. _____ (1 or 2)

Write a qualitative example:

Write a quantitative example:

What type of observation do you think is more scientific and why?

SC7N1.1: Qualitative and Quantitative data

Determine which of the following statements are quantitative and which are qualitative.

1. _____ The cup had a mass of 454 grams.
2. _____ The temperature outside is 25° C.
3. _____ It is warm outside.
4. _____ The tree is 30 feet tall.
5. _____ The building has 25 stories.
6. _____ The building is taller than the tree.
7. _____ The sidewalk is long.
8. _____ The sidewalk is 100 meters long.
9. _____ The race was over quickly.
10. _____ The race was over in 10 minutes.

Qualitative and Quantitative Observations

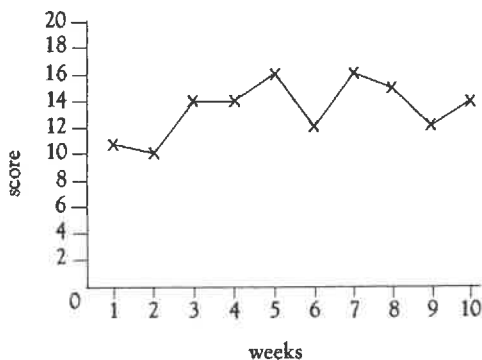
Read the following examples and then decide if each is either Qualitative (QL) or Quantitative (QNT).

- | | |
|--|----------------------------|
| _____ The candy was sour | _____ The slug was slimy |
| _____ The bug was 5 cm long | _____ That laptop is white |
| _____ The flower is red | _____ She is 150 cm tall |
| _____ The mass of the beaker was 122 g | _____ His hair is black |
| _____ My fingernail is 2 cm long | _____ You have 3 sisters |

- Write your own *qualitative* example:
- Write your own *quantitative* example:

SC7N1.1: Interpreting Graphs

Kate keeps a record of her last 10 spelling test scores.



What was Kate's score in week 3?

In which 2 consecutive weeks did Kate's score stay the same?

What was Kate's best score?

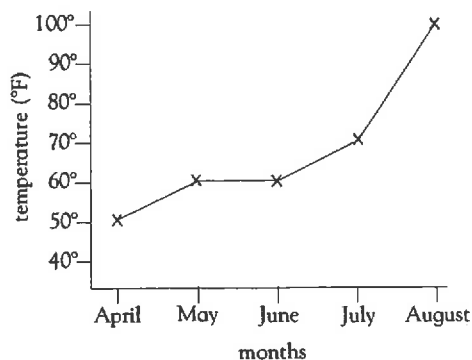
How much did her score improve between weeks 4 and 5?

Identify the IV:

Identify the DV:

Create a hypothesis based on the data about Kate's score on week 11:

The local tourist board produced a graph to show the maximum temperatures in Charleston between April and August.



What was the maximum temperature in April?

Overall, what is happening to the temperature between April and August?

How much did the temperature rise between May and July?

Which two months had the same maximum temperature?

Identify the IV

Identify the DV

How does the IV effect the DV?