



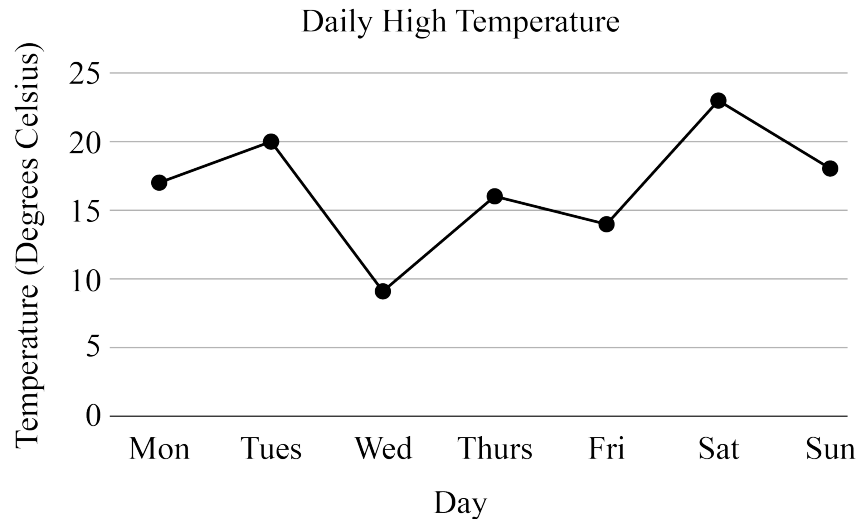
Problem of the Week

Problem A and Solution

Tracking Temperatures

Problem

The weather station at the University of Waterloo records information every day. The graph below shows the high temperature each day for one week.



- Estimate the highest temperature recorded during this week.
- Estimate lowest temperature recorded during this week.
- Estimate the biggest change of temperature from one day to the next during this week.

Solution

- The highest temperature occurs on Saturday. It is between 20 degrees and 25 degrees. It appears to be slightly closer to 25 degrees than 20 degrees, so we will estimate the temperature is 23 degrees.
- The lowest temperature occurs on Wednesday. It is between 5 degrees and 10 degrees, but is very close to 10 degrees. We will estimate the temperature is 9 degrees.
- We estimate the temperature on Monday to be 17 degrees, the temperature on Tuesday to be 20 degrees, the temperature on Thursday to be 16 degrees, the temperature on Friday to be 14 degrees, and the temperature on Sunday to be 18 degrees, along with the estimations in parts (a) and (b).

Thus, from Monday to Tuesday we estimate that it became $20 - 17 = 3$ degrees warmer.

From Tuesday to Wednesday we estimate that it became $20 - 9 = 11$ degrees colder.

From Wednesday to Thursday we estimate that it became $16 - 9 = 7$ degrees warmer.

From Thursday to Friday we estimate that it became $16 - 14 = 2$ degrees colder.

From Friday to Saturday we estimate that it became $23 - 14 = 9$ degrees warmer.

From Saturday to Sunday we estimate that it became $23 - 18 = 5$ degrees colder.

Therefore, we can estimate that the biggest change of temperature from one day to the next is 11 degrees between Tuesday and Wednesday.