R Code for Examples in the book
"Statistics: The Art and Science of Learning from Data"
by Agresti, Franklin and Klingenberg, 5th edition

Chapter 2

Example 19: Women's Heptathlon – Standardizing

Reading in the data of the performances of athletes:

```
meters_200 <- c(24.48, 23.49, 23.26, 24.32, 24.09, 24.67)
javelin <- c(39.39, 46.06, 36.36, 37.77, 40.93, 33.42)
```

To compute the z-scores of each athlete for both events:

```
z_scores_meters_200 <- (meters_200 - mean(meters_200)) / sd(meters_200)
z_scores_javelin <- (javelin - mean(javelin)) / sd(javelin)
```

Rounding z scores to 2 decimal places

```
round(z_scores_meters_200, 2)

## [1]  0.76 -1.00 -1.41  0.48  0.07  1.10

round(z_scores_javelin, 2)

## [1]  0.09  1.64 -0.61 -0.28  0.45 -1.29
```