# Standard Deviation in Real-World Contexts

Let's think about standard deviation in the real world.

## 13.1 Marathon Runner




The runner is running a marathon.

# 13.2 Calculate Standard Deviation




Movie A ratings on a 10-point scale:

9, 8, 10, 10, 7, 1, 8, 1, 2, 8

Movie B ratings on a 10-point scale:

9, 8, 8, 7, 9, 7, 7, 9, 7, 8

Restaurant A ratings on a 100-point scale:

88, 87, 89, 90, 87, 85, 88, 91, 86, 86, 88, 89

Restaurant B ratings on a 100-point scale:

90, 65, 89, 50, 94, 93, 95, 95, 75, 70, 88, 89

1. Calculate the mean and standard deviation for each data set.

2. Considering these statistics, which movie and restaurant would you choose? Explain your reasoning.

# 13.3 Which Route Is the Best Route?

Priya times the ride from home to school on two different routes.
Here are the times in minutes:

Route A: 21.5, 23, 24, 25, 26.5 Route B: 12, 20, 24, 28, 36

1. Before calculating the standard deviation, predict which route has a greater standard deviation. Explain your reasoning.

2. Calculate the standard deviation, and use it to decide which route you would recommend for Priya.