## Lesson 13: Standard Deviation in Real-World Contexts

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


## 13.1: Estimation: Marathon Runner



How long will it take the runner to finish the marathon?

1. Record an estimate that is:

| too low | about right | too high |
| :--- | :--- | :--- |
|  |  |  |

2. Explain your reasoning.

## 13.2: Calculate Standard Deviation



Movie A ratings on a 10 point scale:
$9,8,10,10,7,1,8,1,2,8$
Restaurant A ratings on a 100 point scale: Restaurant B ratings on a 100 point scale:
$88,87,89,90,87,85,88,91,86,86,88,89 \quad 90,65,89,50,94,93,95,95,75,70,88,89$

1. Calculate the mean and standard deviation for each data set.
2. Based on these statistics, which movie and restaurant would you choose? Explain your reasoning.

## 13.3: Which Route is the Best Route?

Priya timed 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.
