Illustrative Mathematics

Grade 5 Unit 5
Lesson 10

Unit 5 Lesson 10: Solve Problems with Decimals

WU Notice and Wonder: The Luge (Warm up)

Student Task Statement

What do you notice? What do you wonder?

A	B
48.532	82.13
48.561	82.75
48.626	82.81
48.634	83.07
48.708	82.80

1 How Accurate Is It?

Student Task Statement

athlete	time (seconds)	speed (mph)
Athlete 1	48.532	82.13
Athlete 2	48.561	82.75
Athlete 3	48.626	82.81
Athlete 4	48.634	83.07
Athlete 5	48.708	82.80

1. How would the results of the race change if the times were recorded to the nearest second?
2. How would the results of the race change if the times were recorded to the nearest tenth of a second?
3. How would the results of the race change if the times were recorded to the nearest hundredth of a second?
4. An athlete recorded a time of 48.85 seconds to the nearest hundredth of a second. What are the possible times of this athlete recorded to the thousandth of a second?
5. An athlete recorded a time of 48.615 seconds to the nearest thousandth of a second. What are the possible times that this athlete recorded to the nearest hundredth of a second?

2 Compare Speeds

Student Task Statement

The table shows the top speeds, in miles per hour, of 5 luge athletes:

athlete	speed (miles per hour)
Athlete 1	82.13
Athlete 2	82.75
Athlete 3	82.81
Athlete 4	83.07
Athlete 5	82.80

1. List the top speeds of the athletes in decreasing order.
2. Do any of the athletes have the same top speed rounded to the nearest tenth of a mile per hour? What about rounded to the nearest mile per hour?
3. There was a sixth athlete who was faster than the rider at 82.80 mph, but slower than the rider at 82.81 mph. What could the speeds of the 3 athletes be if all measured to the nearest thousandth of a mile per hour?