



Swim Meet Scoreboard

Mission: At the regional swim meet, races are timed to the thousandth of a second. The scoreboard can only show some digits. Put the swimmers in order, then see what rounding does to the results.

Big question: How do we compare and round decimals, and why does precision matter?

★ Warm-up: Order it

Order from fastest (least) to slowest.

52.5, 52.08, 52.431 ✓ **52.08, 52.431, 52.5.**

Round 52.431 to the nearest tenth ✓ **52.4.**

Key vocabulary

Thousandth	One part of 1,000 equal parts.
Precision	How exact a measurement is.
Tie	When two values are equal.
Round	Replace with a nearby number with fewer digits.

1 Box 1

Order the finishers

In the simulator: Put the results board in order, fastest first.

Who won the race?

☐ Eli (52.08) ☐ Dev (52.5) ☐ Ana (52.431) ☐ Ben (52.413)

✓ **Eli (52.08)**

2 Box 2

Tricky pair

Which is faster: Ben at 52.413 or Cho at 52.43?

☐ Ben: $52.413 < 52.430$ ☐ Cho, because $43 < 413$ ☐ They tied

✓ **Ben: $52.413 < 52.430$**

3 Box 3

Round the board

In the simulator: Switch the board to **Round to hundredths**.

How many swimmers look TIED now?

Answer: _____ swimmers ✓ **2**

Round to tenths

In the simulator: Switch to **Round to tenths**.

What problem does rounding to tenths cause?

☐ Three swimmers all show 52.4, so you can't tell who got 2nd ☐ Everyone shows the same time ☐ Nothing

✓ **Three swimmers all show 52.4, so you can't tell who got 2nd**

4 Box 4

Round each time

Round each time.

Time	Nearest tenth	Nearest hundredth
52.431	52.4	52.43
52.08	52.1	52.08
52.5	52.5	52.5

5 Box 5

Legend: difference 🏆 Legend only

How many seconds faster was Ben (52.413) than Ana (52.431)?

Answer: _____ s ✓ **0.018**

6 Box 6

Why thousandths?

Explain why swim meets time races to the thousandths of a second. Use an example from the race.

Look for: Explains ties from rounding; Uses an example; a number from the simulator

Exit ticket: answer the big question in your own words

How do we compare and round decimals, and why does precision matter?

Look for: Compare decimals place by place from the left. Rounding makes numbers easier to read but can create ties: 52.431 and 52.43 both round to 52.43. That is why races are timed to the thousandths.

Completion codes

Students see a code like **ABC-I3** when they finish. The first part must match below. The letter is the level (E = Explorer, I = Investigator, L = Legend), and the number at the end is how many stars they earned.

Level	Code starts with
🏆 Explorer	10H-E
🔍 Investigator	1HB-I
🏆 Legend	9PY-L

! Watch for these misconceptions

- "Longer decimals are bigger." 0.45 is less than 0.5.
- "Line up the digits on the right when adding." Line up the decimal points.
- "Multiplying always gives a bigger answer." Multiplying by a decimal less than 1 gives a smaller answer.