

## Place value problem-solving and review

### WHAT THIS LESSON TEACHES

Pull it together: **read, round, compare and convert** numbers — whole and decimal, positive and negative — inside word problems.

| HTh | TTh | Th | H | T | U |
|-----|-----|----|---|---|---|
|     |     |    |   |   |   |
|     |     |    |   |   |   |
|     |     |    |   |   |   |

→ Ask: what place is each digit? Does my estimate match my exact answer?

### DISCUSSION STARTER

**REFLECT** Which is trickier to compare — large whole numbers or decimals? Why?

### ANSWER KEY

**Warm-up:** a) 9 (tenths digit of 2.9) b) 5 (tenths digit of 8.5) c) 3 (tenths digit of 1.3) d) 9 (tenths digit of 2.9)

**Q1:** 95.3

**Q2:** 82.98

**a)** Never — 0.5 and 0.50 are equal — a trailing zero adds nothing.

**b)** Sometimes — True for whole numbers, but 0.999 has more digits than 5 and is smaller.

**c)** Sometimes — Rounding up makes it larger; rounding down makes it smaller.

**d)** Always — Every negative sits left of zero; every positive sits right of it.

**e)** Always — That is exactly what  $\times 100$  does in place value.

**f)** Always — That is how the number line is ordered.

### EXTENSION SHEET · STRETCH ANSWERS

**S1:** between 4 and 5, closer to 4

**S2:** 19.19

**S3:** 19.52

**S4:**  $-4.1 < 0.1 < 2.9 < 4.8$

**S5:** 76.27