

Answer Key

The block pictures are the whole idea: a small CUBE is one, a TEN-ROD is a strip of ten cubes, a HUNDRED-FLAT is ten ten-rods stacked into a 10x10 grid (count the little squares - exactly 100). If you have real base-ten blocks or even LEGO, build page 3's numbers alongside her. The page-6 trap (more digits printed does NOT mean bigger, and fewer can be bigger) is Sam's scam - make her PROVE each answer by comparing hundreds first, then tens, then ones.

Part 1 (page 2) • Meet the Blocks

- 1. cube = 1 (one) · rod = 10 (ten) · flat = 100 (one hundred)
- 2. TEN cubes make one rod · TEN rods make one flat · so 100 little cubes fill one flat
- 3. 10 (a rod is ten ones); 100 (a flat is a hundred ones / ten ten-rods)

Part 2 (page 3) • Build a Number

- 1a. 245 · 1b. 163 · 1c. 320 (three flats, two rods, NO cubes)
- 2. draw 2 flats, 0 rods, 5 cubes for 205 — the tens spot is EMPTY (no rods)
- 3. 306 = 3 flats, 0 rods, 6 cubes (a zero in the tens place — no rods at all)

Part 3 (page 4) • The Place-Value Chart

- 1a. 4 | 5 | 8 · 1b. 6 | 0 | 2 (zero tens — that middle spot must show 0)
- 2. 258 (2 flats, 5 rods, 8 cubes)
- 3. 470 — the ONES spot is 0 (there are no leftover cubes); the 0 holds the place

Part 4 (page 5) • Add or Take 10 and 100

- 1. $462 + 100 = 562$ (only the HUNDREDS column changed: $4 \rightarrow 5$)
- 2a. $340 + 10 = 350$ · 2b. $517 + 100 = 617$ · 2c. $683 - 10 = 673$ · 2d. $725 - 100 = 625$
- 3. +100 changes the HUNDREDS digit; +10 changes the TENS digit; the ones stay put
- 4. $299 + 10 = 309$ — the tens rolled over $9 \rightarrow 0$ and carried one to the hundreds (this one changes TWO columns — the sneaky case!)

Part 5 (page 6) • Which Is Bigger?

- 1a. $615 > 561$ (6 hundreds beats 5 hundreds — stop at the hundreds!)
- 1b. $208 < 280$ (same hundreds; 8 tens beats 0 tens)
- 1c. $700 > 699$ (7 hundreds beats 6 hundreds — even though 699 has bigger tens & ones!)
- 2. 100 is bigger ($90 < 100$). Why: 90 is nine tens; 100 is a whole hundred, which beats any pile of tens. Accept any wording that says 100 is one hundred and 90 is only nine tens.
- 3. any number bigger than 351 and less than 360, e.g. 352, 355, 359 (same 3 hundreds, same 5 tens, ones from 2 to 9)

Part 6 (page 7) • Words & Expanded Form

- 1a. $356 = 300 + 50 + 6$ · 1b. $428 = 400 + 20 + 8$ · 1c. $630 = 600 + 30 + 0$ (zero ones — nothing left over)
- 2. four hundred seven = 407 (there IS a zero in the tens place!) = $400 + 0 + 7$
- 3a. two hundred thirteen = 213 · 3b. five hundred = 500 (zero tens AND zero ones)
- 4. 274 in words: two hundred seventy-four

Part 7 (page 8) • Sam's Bundle Scam

- 1. 253 tokens (2 flats = 200, 5 rods = 50, 3 cubes = 3)
- 2. NO — one flat is 100, nine rods are only 90. Sam is short by 10. He owes one more rod.
- 3. $200 + 40 + 8 = 248$; in words: two hundred forty-eight
- 4. 248 vs 245 — same hundreds, same tens, compare ones: $8 > 5$, so the Martian's 248-pile is bigger; Sam's 245 pile is SMALLER, so Sam loses the bet. Case closed.