

Scale Secrets Answer Key

1. 4,000 / 40,000 / Sample answer: The digits shift one place to the left each step. Each number is 10 times greater.
2. 9 / 0.9 / Sample answer: The decimal point moves one place to the left each step.
3. 3,000,000 / 300,000,000 / Sample answer: Each number is multiplied by 100.
4. 0.05 / 0.0005 / Sample answer: Each number is divided by 100.
5. 800 / 8,000 / Sample answer: The decimal point moves one place to the right each step.
6. 0.0065 / 0.00065 / Sample answer: The decimal point moves one place to the left each step, making the number 10 times smaller.

Teacher's Guide

- Begin by completing the first pattern together and discuss why the numbers change the way they do.
- Encourage students to explain patterns using place value language instead of only describing decimal movement.
- Provide place value charts for students who need visual support.
- Have students compare answers with a partner and justify the missing numbers.
- Ask students to create their own multiply by 10 or divide by 10 pattern for classmates to solve.
- Extend the lesson by introducing patterns that use 10^3 or 10^4 and having students predict several additional terms.