

**Activity 9.12 WHERE DOES THE DECIMAL GO? MULTIPLICATION**

Have students compute the following product: 24×63 . Using only the result of this whole number computation (1512) and estimation, have them give the exact answer to each of the following:

$$0.24 \times 6.3 \quad 24 \times 0.63 \quad 2.4 \times 63 \quad 0.24 \times 0.63$$

For each computation, have students write a rationale for how they placed the decimal point. For example, on the first one a student might explain that 0.24 is close to one-fourth and one-fourth of 6 is less than two, so the answer must be 1.512. They can check their results with a calculator. ELLs may apply a different mental strategy that is common in their country of origin. Even if they have trouble articulating their reasoning, it is important to consider alternative ways to reason through the problem. It is also important to have a class discussion about errors and how to avoid them.

From Van de Walle et. al. (2014). *Teaching Student-Centered Mathematics Grades: Developmentally Appropriate Instruction for Grades 6 – 8 (2nd Ed.)*. Toronto: Pearson Education, Inc. (p. 160).