1. Mary Lou says that 50 times 4.68 is the same as 0.50 times 468, so she can just take half of 468, which is 234. Can she do this? How could she find 500 times 8.52 in a similar way? Explain.

**Solution.**

\[
50 \times \frac{468}{100} = \frac{50}{100} \times 468,
\]

and 50/100 equals one-half. This is correct due to the commutative and associative properties of multiplication. 500 \times 8.52 can be changed to .5 times 8520 which equals 4260.

2. When changing 7.452 to a fraction. Henry set \( n = 7.\overline{452} \), then multiplied both sides by 100, but when he went to subtract he got another repeating decimal. How could you help?

**Solution.** There are 3 digits in the repeating pattern. Thus, Henry must multiply by 100, which is \( 10^3 \), in order to get the numbers to line up for subtraction.

3. Barry said that to find \( \frac{1}{3} \) of a number, he just had to multiply by 0.3, so that \( \frac{1}{3} \) of 54, for example, would equal 16.2. Do you agree with Barry? Explain.

**Solution.** Barry is rounding 0.3 (which is equal to 1/3) to 0.3, which equals 3/10 not 1/3. He might be better off remembering that multiplying by 1/3 is the same as dividing by 3. 54 \( \div \) 3 = 18 is much different than 16.2.