

Summary of Multiplication and Division Shortcuts

To multiply any number by multiples of 10 (10, 100, 1000, etc),

- a. count the number of zeros, and
- b. move the decimal point that many places to the right.

Examples:

$$47.529(10) = 475.29$$

$$47.529(100) = 4752.9$$

$$47.529(1000) = 47,529$$

$$47.529(10,000) = 475,290$$

To divide any number by a multiple of 10 (10, 100, 1000, etc),

- a. count the number of zeros in the divisor, and
- b. move the decimal point that number of places to the left.

Examples:

$$47.529 \div 10 = 4.7529$$

$$47.529 \div 100 = 0.47529$$

$$47.529 \div 1000 = 0.047529$$

$$47.529 \div 10,000 = 0.0047529$$

To multiply any number by 0.1, 0.01, 0.001, etc,

- a. count the number of decimal places in the tenth, hundredth, or thousandth, and
- b. move the decimal point that many places to the left.

Examples:

$$47.529(0.1) = 4.7529$$

$$47.529(0.01) = 0.47529$$

$$47.529(0.001) = 0.047529$$

To divide any number by 0.1, 0.01, 0.001, etc,

- a. count the number of decimal places in the divisor, and
- b. move the decimal point that number of places to the right.

Examples:

$$47.529 \div 0.1 = 475.29$$

$$47.529 \div 0.01 = 4752.9$$

$$47.529 \div 0.001 = 47,529$$

$$47.529 \div 0.0001 = 475,290$$