

Decimals

Multiplying & Dividing



This sheet is designed as a review aid. If you have not previously studied this concept or after reviewing the contents you still don't pass you should enroll in the appropriate math class.

Multiplying Decimals

Rules:

1. Multiply the numbers as you would whole numbers.
2. Count the total number of digits on the right side of (behind) the decimal on both numbers being multiplied.
3. Beginning at the far right side of the answer, count over the same number of digits and place the decimal to the left of the last digit counted. You will need to add zeros on the left if there are fewer digits in the answer than you counted in the original problem.

Example:

Problem: $1.03 \times .25 =$

Solution:

$$\begin{array}{r} 1.03 \\ \times .25 \\ \hline 515 \\ 2060 \\ \hline .2575 \end{array}$$

Four digits behind decimals

Move decimal four digits to the left

Dividing Decimals

Rules:

1. If not already done, rewrite the problem in standard long division form.
2. Move the decimal in the outside number (divisor) all the way to the right, creating a whole number.

3. Move the decimal in the inside number (dividend) the same number of digits. If necessary, add zeros to the right of the number. (If there is no decimal shown in the dividend, begin at the far right and add enough zeros to move the decimal right from that point.)
4. Place the decimal for the answer directly above the decimal in the dividend.
5. Divide the problem as you would a whole number.

Example:

Problem: $2.1 \div .07 =$

Solution:

$$\begin{array}{r}
 30. \\
 .07 \overline{)2.10}
 \end{array}$$

↑ Move the decimal over to make a whole number
 ← Bring Decimal straight up
 ← Bring inside decimal over the same distance as the outside decimal (add zeros if necessary)

Review:

1) $\begin{array}{r} 1.03 \\ \times .25 \\ \hline \end{array}$

2) $\begin{array}{r} 2.4 \\ \times 1.2 \\ \hline \end{array}$

3) $\begin{array}{r} .06 \\ \times .63 \\ \hline \end{array}$

4) $.2 \div 4 =$

5) $.4 \times 1.5 =$

6) $4 \overline{)1.23}$

7) $.03 \overline{)12.6}$

8) $.5 \overline{)35}$

9) $3 \times 1.42 =$

10) $2.1 \div .07 =$

Check your answers with the key below. If you missed more than two problems, review this paper again, looking for where you may have made a mistake. If you still have trouble with this concept, you may need to enroll in a basic math class, such as the OWATC Math 1 class.

Key:

1) .2575
7) 420

2) 2.88
8) 70

3) .0378
9) 4.26

4) .05
10) 30

5) .6

6) .3075