

Multiplying a Decimal by a Decimal

Rule:

When multiplying decimals, multiply as usual. Then, beginning at the right, count the total number of decimal places in both factors and count off that many decimal places in the product.

Examples:

$$\begin{array}{r} .9 \text{ (1) or } \frac{9}{10} \times \frac{9}{10} \\ \times .9 \text{ (1)} \\ \hline .81 \text{ (2)} \end{array}$$

$$\frac{81}{100} = .81$$

$$\begin{array}{r} 6.2 \text{ (1)} \\ \times .38 \text{ (2)} \\ \hline 496 \\ + 186 \\ \hline 2.356 \text{ (3)} \end{array}$$

$$\begin{array}{r} 1.52 \text{ (2)} \\ \times .41 \text{ (2)} \\ \hline 152 \\ + 608 \\ \hline .6232 \text{ (4)} \end{array}$$

$$\begin{array}{r} 2.48 \text{ (2)} \\ \times .192 \text{ (3)} \\ \hline 496 \\ 2232 \\ + 248 \\ \hline .47616 \text{ (5)} \end{array}$$

Class Practice

1. Write the number of decimal places in the product. Do not multiply.

a. $\begin{array}{r} 1.3 \\ \times 2.7 \\ \hline \end{array}$

b. $\begin{array}{r} .23 \\ \times 18 \\ \hline \end{array}$

c. $\begin{array}{r} 6.8 \\ \times 19 \\ \hline \end{array}$

d. $\begin{array}{r} .76 \\ \times 2.3 \\ \hline \end{array}$

e. $\begin{array}{r} .43 \\ \times 26 \\ \hline \end{array}$

f. $\begin{array}{r} 0.2 \\ \times 1.4 \\ \hline \end{array}$

g. $\begin{array}{r} .11 \\ \times 56 \\ \hline \end{array}$

2. Multiply. Position the decimal point in the product correctly. (For additional practice, see Supplementary Exercises, p. 338.)

a. $\begin{array}{r} 6.9 \\ \times 7.2 \\ \hline \end{array}$

b. $\begin{array}{r} 3.51 \\ \times 7.8 \\ \hline \end{array}$

c. $\begin{array}{r} .902 \\ \times 15 \\ \hline \end{array}$

d. $\begin{array}{r} 0.23 \\ \times 16 \\ \hline \end{array}$

e. $\begin{array}{r} .042 \\ \times 37 \\ \hline \end{array}$

f. $.52 \times .3 = \underline{\hspace{2cm}}$

g. $3.8 \times .9 = \underline{\hspace{2cm}}$

h. $7.264 \times .6 = \underline{\hspace{2cm}}$

3. Fill in the blanks.

a. 24 mo. = _____ yr.

b. 10 ft. = _____ in.

c. 12 bu. = _____ pk.

d. 12 pk. = _____ bu.

e. 24 hr. = _____ da.

f. 8 oz. = _____ lb.

g. 15 ft. = _____ yd.

h. 12 qt. = _____ pk.

i. 18 in. = _____ yd.

4. Solve these story problems.

a. Miss Houston bought a $14\frac{3}{4}$ pound turkey at \$84 per pound. What was the cost of the turkey?

b. The instructions said to cook the turkey 20 minutes per pound. How long should Miss Houston cook the turkey?

Review

5. Follow the signs.

a.
$$\begin{array}{r} 9.32 \\ 4.76 \\ +16.05 \\ \hline \end{array}$$

b.
$$\begin{array}{r} 432.6 \\ -158.23 \\ \hline \end{array}$$

c.
$$\begin{array}{r} .16 \\ \times .7 \\ \hline \end{array}$$

d.
$$\begin{array}{r} 9 \\ -5\frac{2}{7} \\ \hline \end{array}$$

e.
$$\frac{3}{8} + \frac{3}{4}$$

6. Change to improper fractions.

a. $4\frac{2}{3} = \underline{\hspace{2cm}}$

b. $6\frac{1}{5} = \underline{\hspace{2cm}}$

c. $9\frac{4}{7} = \underline{\hspace{2cm}}$

d. $7\frac{2}{9} = \underline{\hspace{2cm}}$

e. $11\frac{4}{11} = \underline{\hspace{2cm}}$

7. Divide and check by casting out 9s.

a. $23 \overline{)784,026}$

b. $931 \overline{)143,296}$

c. $832 \overline{)753,792}$

8. Write true or false in the blank.

- a. A meter measures length.
- b. A gram measures mass.
- c. A liter holds less than 1 quart.
- d. A kilometer is about $\frac{1}{2}$ mile.

9. Find the number of coins.

Misty has \$2.35 in dimes and nickels. She has 1 less nickel than dimes. How many of each coin does she have?



10. Write the Arabic numerals.

- a. CMXXXVIII
- b. DCCCXXIV
- c. MMCCCXVI
- d. MDCCLXXVI
- e. CDLXXXVI
- f. CMXLVIII
- g. XXVII
- h. LXIX
- i. DCXCVIII

Homework

Lesson 90, homework section