



SKILL 13: Zeros in Decimal Products

When you multiply decimals, sometimes you must annex zeros to have the correct number of digits to the right of the decimal point.

Example

Multiply: 0.31×0.18 .

Count the numbers of digits to the right of the decimal point in each factor.

$0.18 \leftarrow$ 2 decimal places
 $\times 0.31 \leftarrow$ 2 decimal places
 \leftarrow 4 decimal places

Multiply.

$$\begin{array}{r} 18 \\ \times 31 \\ \hline 18 \\ 54 \\ \hline 558 \end{array}$$

Annex zeros as needed in your answer.

$$\begin{array}{r} 0.18 \\ \times 0.31 \\ \hline 18 \\ 54 \\ \hline 0.0558 \end{array}$$

So, $0.31 \times 0.18 = 0.0558$.

Estimate to check your answer.

$$0.3 \times 0.2 = 0.06.$$

Since 0.06 is close to 0.0558, the answer is reasonable.

Annex one zero so the product has 4 decimal places.

Guided Practice

Find each product.

1. $0.102 \leftarrow$ ___ decimal places
 $\times 0.45 \leftarrow$ ___ decimal places

$$\begin{array}{r} \square\square\square \\ \square\square\square \\ \hline \square\square\square\square\square\square \end{array} \leftarrow$$
 ___ decimal places

2. $5.07 \leftarrow$ ___ decimal places
 $\times 0.0073 \leftarrow$ ___ decimal places

$$\begin{array}{r} \square\square\square\square \\ \square\square\square\square \\ \hline \square\square\square\square\square\square\square\square \end{array} \leftarrow$$
 ___ decimal places

3. $0.028 \leftarrow$ ___ decimal places
 $\times 0.5 \leftarrow$ ___ decimal place
 \leftarrow ___ decimal places

4. $1.83 \leftarrow$ ___ decimal places
 $\times 0.04 \leftarrow$ ___ decimal places
 \leftarrow ___ decimal places

5. Multiply: 0.08×0.006 .

a. Total digits after the decimal point in the product: _____

b. $8 \times 6 =$ _____

c. $0.08 \times 0.006 =$ _____

SKILL 13: Practice

Find each product.

1.
$$\begin{array}{r} 0.028 \\ \times 0.7 \\ \hline \end{array}$$

2.
$$\begin{array}{r} 1.83 \\ \times 0.004 \\ \hline \end{array}$$

3.
$$\begin{array}{r} 0.0102 \\ \times 0.045 \\ \hline \end{array}$$

4.
$$\begin{array}{r} 4.12 \\ \times 0.0043 \\ \hline \end{array}$$

5.
$$\begin{array}{r} 2.3 \\ \times 0.015 \\ \hline \end{array}$$

6.
$$\begin{array}{r} 0.17 \\ \times 0.03 \\ \hline \end{array}$$

7.
$$\begin{array}{r} 0.45 \\ \times 0.08 \\ \hline \end{array}$$

8.
$$\begin{array}{r} 0.098 \\ \times 0.032 \\ \hline \end{array}$$

9.
$$\begin{array}{r} 0.035 \\ \times 0.09 \\ \hline \end{array}$$

10.
$$\begin{array}{r} 2.34 \\ \times 0.0005 \\ \hline \end{array}$$

11.
$$\begin{array}{r} 0.111 \\ \times 0.04 \\ \hline \end{array}$$

12.
$$\begin{array}{r} 6.73 \\ \times 0.011 \\ \hline \end{array}$$

13. $0.3 \times 0.002 =$ _____

14. $0.3 \times 0.2 =$ _____

15. $0.003 \times 0.02 =$ _____

16. $12 \times 0.0005 =$ _____

17. $0.09 \times 0.03 =$ _____

18. $0.07 \times 1.1 =$ _____

19. $0.003 \times 0.6 =$ _____

20. $1.003 \times 0.007 =$ _____

21. $0.67 \times 0.01 =$ _____

22. $2.3 \times 0.0003 =$ _____

Solve.

23. A pen costs \$.75. Sales tax is 0.08 times the cost of the pen. How much sales tax will be paid? _____

24. Find the product: 0.36×0.04 .*Skill 13*

A 0.0124

C 0.00124

B 0.0144

D 0.00144

25. Find the difference: $3 - 0.02$.*Skill 7*

F 0.01

H 2.98

G 2.8

J 3.02