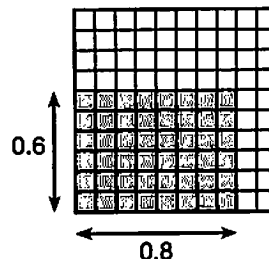




SKILL 12: Multiplying a Decimal by a Decimal

The rectangle on the grid is 0.8 unit long and 0.6 unit wide. Its area is 0.48 square unit, so $0.8 \times 0.6 = 0.48$.



To multiply two decimals, multiply as with whole numbers. Count the total number of digits to the right of the decimal point in both factors. Write the product with the same number of decimal places.

Example

Multiply: 0.48×0.52 .

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

$$\begin{array}{r} 0.52 \leftarrow 2 \text{ decimal places} \\ \times 0.48 \leftarrow 2 \text{ decimal places} \\ \hline \leftarrow 4 \text{ decimal places} \end{array}$$

Multiply.

$$\begin{array}{r} 52 \\ \times 48 \\ \hline 416 \\ 208 \\ \hline 2496 \end{array}$$

Put the decimal point in the answer.

$$\begin{array}{r} 0.52 \\ \times 0.48 \\ \hline 416 \\ 208 \\ \hline 0.2496 \end{array}$$

0.2496 Show 4 decimal places.

$$0.48 \times 0.52 = 0.2496$$

Estimate to check your answer.

$0.5 \times 0.5 = 0.25$. Since 0.25 is close to 0.2496, the answer is reasonable.

Guided Practice

Find each product. Check your answer by estimating.

1.
$$\begin{array}{r} 16.6 \leftarrow \text{___ decimal place} \\ \times 7.1 \leftarrow \text{___ decimal place} \\ \hline \square\square\square \\ \square\square\square\square \\ \hline \square\square\square\square\square \leftarrow \text{___ decimal places} \end{array}$$

Estimate: $\text{___} \times \text{___} = \text{___}$

2.
$$\begin{array}{r} 3.08 \leftarrow \text{___ decimal places} \\ \times 8.9 \leftarrow \text{___ decimal place} \\ \hline \square\square\square\square \\ \square\square\square\square \\ \hline \square\square\square\square\square \leftarrow \text{___ decimal places} \end{array}$$

Estimate: $\text{___} \times \text{___} = \text{___}$

3. Multiply: 7.07×4.9 .

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

b. $707 \times 49 = \text{_____}$

c. $7.07 \times 4.9 = \text{_____}$

d. Estimated product: _____

SKILL 12: Practice

Place a decimal point in each product.

1. $3.7 \times 19.8 = 7326$ 2. $5.7 \times 19.9 = 11343$ 3. $2.9 \times 13.82 = 40078$
 4. $10.2 \times 9.49 = 96798$ 5. $12.14 \times 8 = 9712$ 6. $0.02 \times 378.3 = 7566$

Multiply. Estimate to check your answer.

7. $\begin{array}{r} 50.9 \\ \times 0.9 \\ \hline \end{array}$ 8. $\begin{array}{r} 0.91 \\ \times 0.2 \\ \hline \end{array}$ 9. $\begin{array}{r} 9.031 \\ \times 0.5 \\ \hline \end{array}$ 10. $\begin{array}{r} 0.36 \\ \times 0.7 \\ \hline \end{array}$
 11. $\begin{array}{r} 0.678 \\ \times 1.2 \\ \hline \end{array}$ 12. $\begin{array}{r} 9.2 \\ \times 0.25 \\ \hline \end{array}$ 13. $\begin{array}{r} 5.6 \\ \times 4.8 \\ \hline \end{array}$ 14. $\begin{array}{r} 12.52 \\ \times 1.6 \\ \hline \end{array}$

15. $55.5 \times 0.7 = \underline{\hspace{2cm}}$ 16. $1.02 \times 0.6 = \underline{\hspace{2cm}}$
 17. $61.4 \times 0.5 = \underline{\hspace{2cm}}$ 18. $0.9 \times 200.4 = \underline{\hspace{2cm}}$
 19. $3.3 \times 38.8 = \underline{\hspace{2cm}}$ 20. $4.7 \times 8.12 = \underline{\hspace{2cm}}$

Solve. Remember that to find the area of a rectangle, you multiply the length by the width.

21. A rectangular park is 1.5 miles long and 1.2 miles wide. Find the area in square miles. _____
 22. A square floor tile measures 4.5 centimeters on each side. Find the area of the tile in square centimeters. _____



23. Multiply:
- 0.27×6.4
- .

A 17.28 C 1.728
 B 572 D 1624

Skill 12

24. Pick a number so the decimals are in order. 7.022, _____, 7.002.
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- Skill 3

F 7.202 H 7.0
 G 7.22 J 7.02