

Guided Notes

3.4 Multiply Decimals by Decimals (6.NS.3)

Multiply Decimals

- When multiplying a decimal by a decimal, multiply as with whole numbers.
- Then, put the decimal point in the answer - it will have as many decimal places as the two factors combined.

Annex a Zero

- If there are not enough decimal places in the answer, you need to annex zeros to the left.

Guided Practice: Multiply

1.) $0.6 \cdot 0.5$

$$\begin{array}{r} \overset{3}{0.6} \text{ ①} \\ \times 0.5 \text{ ①} \\ \hline 0.30 \end{array}$$

0.30

2.) ~~$27.43 \cdot 1.089$~~

7.154

$$\begin{array}{r} \overset{6}{2} \overset{5}{2} \text{ 3.) } 0.98 \cdot 7.3 \\ \times 0.98 \text{ ②} \\ \times 7.3 \text{ ①} \\ \hline 1294 \\ + 6860 \\ \hline 7.154 \end{array}$$

4.) $2.7 \cdot 1.35$

$$\begin{array}{r} \overset{2}{1} \overset{1}{1} \text{ 4.) } 2.7 \cdot 1.35 \\ \times 1.35 \text{ ②} \\ \times 2.7 \text{ ①} \\ \hline 1945 \\ + 2700 \\ \hline 3.645 \end{array}$$

3.645

5.) ~~$0.03 \cdot 0.09$~~

$$\begin{array}{r} \text{6.) } 0.04 \cdot 2.12 \\ \times 2.12 \text{ ②} \\ \times 0.04 \text{ ②} \\ \hline 0.848 \\ \hline \text{0.0848} \end{array}$$

0.0848

- 7.) A mile is equal to approximately 1.609 kilometers. How many kilometers is 2.5 miles?
Justify your answer.

$$\begin{array}{r} \overset{2}{1} \overset{1}{1} \text{ 7.) } 2.5 \text{ miles} \\ \times 1.609 \text{ km} \\ \hline 1515 \\ + 15150 \\ + 151500 \\ \hline 4.0225 \end{array}$$

There are 4.0225 km in 2.5 miles.

Building on the Essential Question - Why is estimating not as helpful when multiplying very small numbers such as 0.007 and 0.053?

↳ both numbers round to zero

↳ $0 \times 0 = 0$ (won't tell you if it's close to the real answer)

Rate Yourself

Are you ready to move on?

YES OR NO