

Vocabulary: multiplying decimal numbers using place value

decimal
place value
columns
place holder
digit
multiply

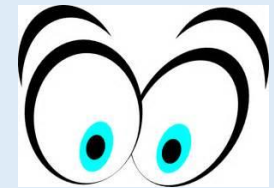


Teacher's Note:
See 'Vocabulary Shorts' resource below for
ideas and games to develop and embed
vocabulary.

[Vocabulary Shorts](#)

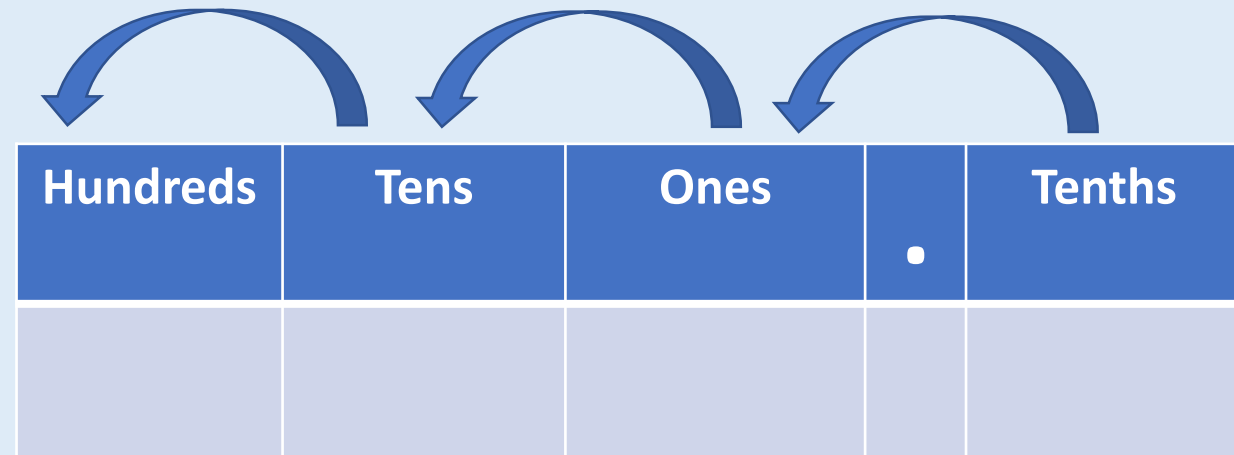
Can use place value to multiply decimal numbers by 10, 100 or 1000

Multiplying by 10



When you multiply a number by 10, each digit moves **one place to the left**. It's the same rule for **whole numbers** and **decimal numbers**!

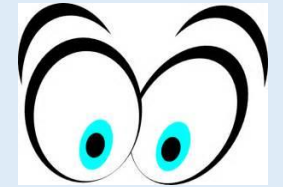
The **tenths** digit moves to the **ones** column, the **ones** digit moves to the **tens** column, the **tens** digit moves to the **hundreds** column etc.



Let's look at some examples...

Can use place value to multiply decimal numbers by 10, 100 or 1000

Multiplying by 10



Hundreds	Tens	Ones	.	Tenths
		9	.	1
	9	1		

When you multiply a decimal number by 10, each digit moves **one place to the left.**

9.1 x 10 becomes 91
(ninety one)

Can use place value to multiply decimal numbers by 10, 100 or 1000

Your turn

Multiply each of these numbers by 10:

A. 5.2

B. 6.31

C. 32.24

D. 7.04



Thousands	Hundreds	Tens	Ones	.	Tenths	Hundredths

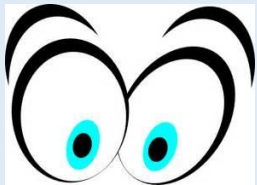
Problem solving

Ben bought 10 goldfish. Each goldfish cost £1.25. How much money did he spend?



Can use place value to multiply decimal numbers by 10, 100 or 1000

Multiplying by 100



Hundreds	Tens	Ones	.	Tenths
		9	.	1
	9	1		
9	1	0		

When you multiply a decimal number by 100, each digit moves **two places to the left.**

9.1×100 becomes 910
(nine hundred and ten)

Don't forget to add a **zero** as a **place holder!**

Can use place value to multiply decimal numbers by 10, 100 or 1000

Your turn

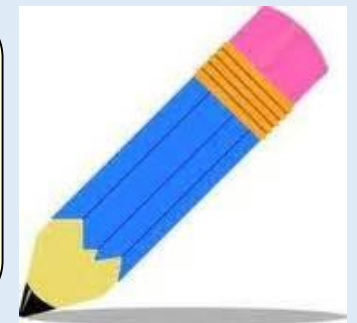
Multiply each of these numbers by 100:

A. 3.6

B. 16.2

C. 45.74

D. 4.02



Thousands	Hundreds	Tens	Ones	.	Tenths	Hundredths

Problem Solving

The spine of a DVD case measures 2.8cm wide when stood on a shelf.
What is the total width of 100
DVDs on the shelf?



Can use place value to multiply decimal numbers by 10, 100 or 1000



Multiplying by 1000

Thousands	Hundreds	Tens	Ones	.	Tenths
			9	.	1
		9	1		
	9	1	0		
9	1	0	0		

When you multiply a decimal number by 1000, each digit moves **three places to the left.**

9.1×1000 becomes 9100
(nine thousand one hundred)

Don't forget to add **zeros** as **place holders!**

Reasoning

Joe says the answer to 35×1000 and 350×100 is different. Is he right? Explain how you know.

