



M1e: Can use place value to multiply whole numbers by 10, 100 or 1000

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Vocabulary: multiplying whole numbers using place value

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](#)

Review previous learning

1. Put these numbers in ascending order:

37.18, 37.98, 34.098, 35.982, 34.098

2. Put these numbers in descending order:

24.781, 25.997, 24.672, 25.668, 26.981

3. Round these numbers to the nearest 10, 100 and 1000.

A. 8415

B. 3960

C. 6500

D. 24,645

Reviewing previous learning: Adding, subtraction and multiplying fractions.

Don't forget to simplify
your answers!

1. $\frac{7}{10} - \frac{1}{5} =$

2. $\frac{3}{5} + \frac{1}{7} =$

3. $\frac{8}{9} - \frac{1}{5} =$

Don't forget to simplify your
answers!

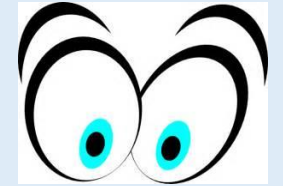
4. $\frac{1}{4} \times \frac{3}{8} =$

5. $\frac{3}{8} \times \frac{4}{5} =$

6. $\frac{5}{6} \times \frac{3}{9} =$

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

Multiplying by 10, 100 or 1000



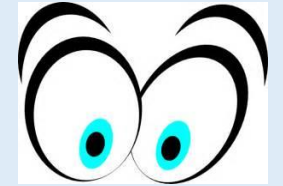
When multiplying whole numbers, we need to remember the **place value** of **digits**.

Hundreds	Tens	Ones
3	1	7

The number $317 = 300 + 10 + 7$

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

Multiplying by 10



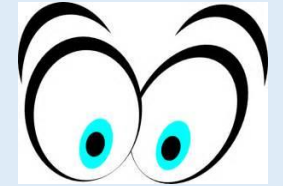
When you multiply a number by 10, each digit moves **one place to the left**.
The **ones** digit moves to the **tens** column, the **tens** digit moves to the **hundreds** column etc.

Hundreds	Tens	Ones

Let's look at some examples...

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Multiplying by 10



Hundreds	Tens	Ones
		9
	9	0

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

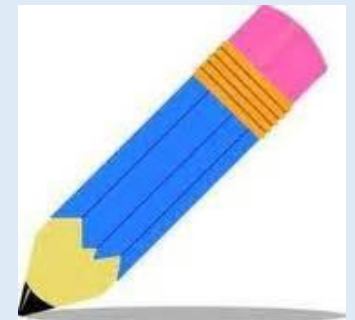
9 x 10 becomes 90 (ninety).
We add a zero as a **place holder.**

Can use place value to multiply whole numbers by
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Your turn

Multiply each of these numbers by 10:

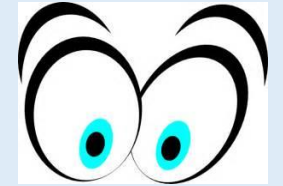
- 16 A. 5 B. C. 45 D. 210 E. 305



Thousands	Hundreds	Tens	Ones

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

Multiplying by 100



Hundreds	Tens	Ones
		9
	9	0
9	0	0

Red arrows indicate the movement of the digit 9 from the Ones place to the Tens place, and then to the Hundreds place.

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

9 x 100 becomes 900
(Nine hundred)

Can use place value to multiply whole numbers by
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Your turn

Multiply each of these numbers by 100:

A. 6

B. 19

C. 35

D. 482

E. 603



Ten thousands	Thousands	Hundreds	Tens	Ones

Reasoning

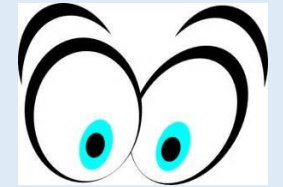
Joe says the answer to 25×100
and 250×10 is the same.

Is he right?



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

Multiplying by 1000



Thousands	Hundreds	Tens	Ones
			9
		9	0
	9	0	0
9	0	0	0

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

9 x 1000 becomes 9000
(nine thousand)

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

Your turn

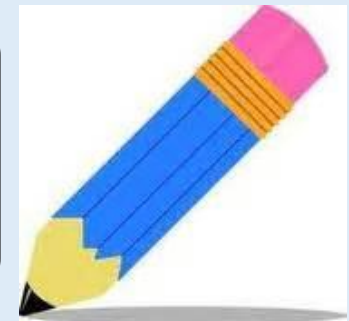
Multiply each of these numbers by 1000:

A. 4

B. 12

C. 74

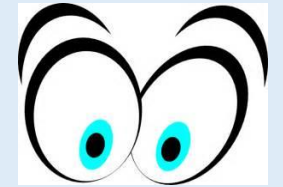
D. 31



Ten thousands	Thousands	Hundreds	Tens	Ones

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

This is what 35×10 , 100 and 1000 looks like:-



Ten thousands	Thousands	Hundreds	Tens	Ones
			3	5
		3	5	0
	3	5	0	0
3	5	0	0	0

$$35 \times 10 = 350$$

$$35 \times 100 = 3500$$

$$35 \times 1000 = 35,000$$

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

Your turn

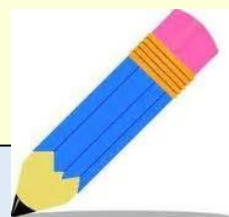
Ten thousands	Thousands	Hundreds	Tens	Ones
				7

In your book draw and complete the chart yourself:

$$7 \times 10 =$$

$$7 \times 100 =$$

$$7 \times 1000 =$$



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Your turn

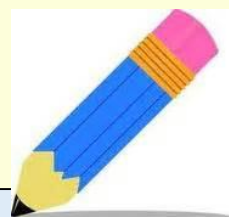
Ten thousands	Thousands	Hundreds	Tens	Ones
			3	2

In your book
draw and
complete
the chart yourself:

$$32 \times 10 =$$

$$32 \times 100 =$$

$$32 \times 1000 =$$



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

Your turn

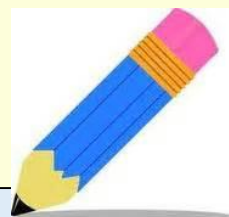
Ten thousands	Thousands	Hundreds	Tens	Ones
			8	3

In your book
draw and
complete
the chart yourself:

$$83 \times 10 =$$

$$83 \times 100 =$$

$$83 \times 1000 =$$



Problem Solving

A sheet of paper is 34mm thick.
There are 1000 sheets in a pack.
How thick is the pack of paper?



Problem Solving

How can you use $6 \times 100 = 600$
to work out 60×10 ?



