MULTIPLICATION – DAY 1

LO:I can use written methods to multiply 4 digit numbers by 1 digit numbers

STARTER

What's the same? What's different?

thousands	hundreds	tens	ones
🔴🔴🔴		🟡	🟢🟢
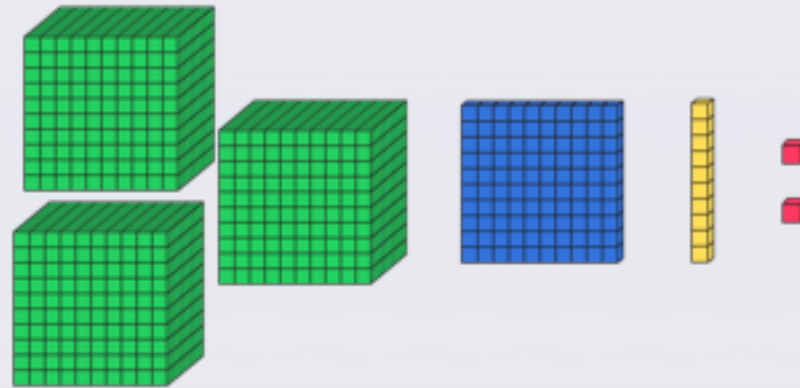
Explain your answer.

STARTER

What's the same? What's different?

thousands	hundreds	tens	ones
🔴🔴🔴		🟡	🟢🟢
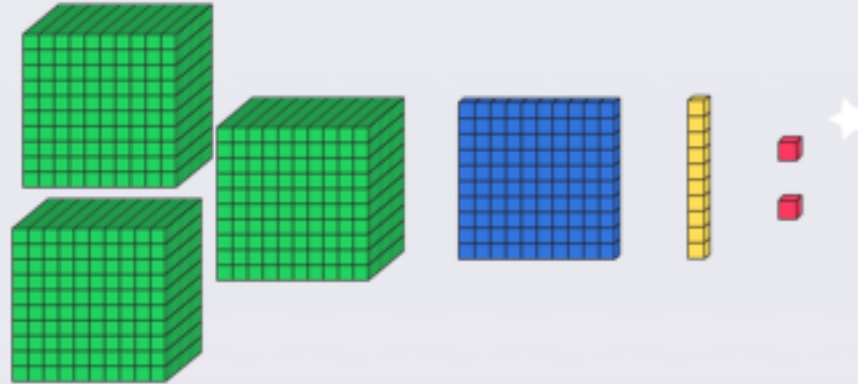
The place value counters represent the number 3,012. Whereas, the Base 10 pieces represent the number 3,112. So, the numbers have the same amount of thousands, tens and ones. However, the place value counter representation has zero hundreds, while the Base 10 representation has one hundred.

Use counters to complete the place value chart and calculation.

thousands	hundreds	tens	ones

	TH	H	T	O
	1	2	1	1
×				2

FLUENCY

thousands	hundreds	tens	ones
1,000	100 100	10	1
1,000	100 100	10	1

	TH	H	T	O
	1	2	1	1
×				2
	2	4	2	2

Use counters to complete the place value chart and calculation.

thousands	hundreds	tens	ones

	TH	H	T	O
	1	2	1	1
×				3

FLUENCY

thousands	hundreds	tens	ones
1,000	100 100	10	1
1,000	100 100	10	1
1,000	100 100	10	1

	TH	H	T	O
	1	2	1	1
×				3
	3	6	3	3

FLUENCY

Use counters to complete the place value chart and calculation.

thousands	hundreds	tens	ones

	TH	H	T	O
	2	1	0	3
×				3

FLUENCY

thousands	hundreds	tens	ones
1,000 1,000	100		1 1 1
1,000 1,000	100		1 1 1
1,000 1,000	100		1 1 1

	TH	H	T	O
	2	1	0	3
×				3
	6	3	0	9

PROBLEN SOLVING

Mrs Jones earns £1,415 per week. How much does she earn in four weeks?

thousands	hundreds	tens	ones

	TH	H	T	O
×				

PROBLEN SOLVING

Mrs Jones earns £1,415 per week. How much does she earn in four weeks?

PROBLEN SOLVING

Miss Singh earns £1,324 per week. How much does she earn in four weeks?

thousands	hundreds	tens	ones

	TH	H	T	O
	1	3	2	4
×				4

PROBLEN SOLVING

Miss Singh earns £1,324 per week. How much does she earn in four weeks?

thousands	hundreds	tens	ones
1,000	100 100 100	10 10	1 1 1 1
1,000	100 100 100	10 10	1 1 1 1
1,000	100 100 100	10 10	1 1 1 1
1,000	100 100 100	10 10	1 1 1 1
1,000		10	

	TH	H	T	O
		1	3	2	4
×				4

PROBLEM SOLVING

James says, "The answer to 2,413 x 4 is 816,412."

What's gone wrong?

Can you correct the calculation and get the correct answer?

	TH	H	T	O
	2	4	1	3
×				4
	8	16	4	12

PROBLEM SOLVING

James says, "The answer to 2,413 x 4 is 816,412."

James has placed the digits from the exchanges from the ones to tens and hundreds to thousands in the ones and hundreds place respectively. James should only have one digit per square to make sure it does not happen in future!

If the exchanges happen as below, then it is easier to arrive at the correct answer, 9,652.

	TH	H	T	O
	2	4	1	3
×				4
	8	16	4	12

	TH	H	T	O
	2	4	1	3
×				4
	9	6	5	2
	1		1	

PROBLEM SOLVING

Use the following clues to complete the calculation:

- From left to right, the second digit in the multiplicand is the same as the multiplier;

- The first digit is worth one less than the second digit;

- The third digit is worth one more than the second digit;

- The fourth digit is worth two more than the second digit;

- The product's ones digit is the same as the multiplier.

×					4

PROBLEM SOLVING

Use the following clues to complete the calculation:

- From left to right, the second digit in the multiplicand is the same as the multiplier;
- The first digit is worth one less than the second digit;
- The third digit is worth one more than the second digit;
- The fourth digit is worth two more than the second digit;
- The product's ones digit is the same as the multiplier.

		3	4	5	6
×					4
	1	3	8	2	4
			1	2	2

REASONING

Evaluation:

If you multiply an even 4-digit number by an odd 1-digit number, the answer is an odd number.

Is Astrobee's statement always, sometimes or never true?

Explain your answer.

REASONING

Evaluation:

If you multiply an even 4-digit number by an odd 1-digit number, the answer is an odd number.

	TH	H	T	O
	3	0	1	2
×				3
	9	0	3	6

	TH	H	T	O
	1	2	0	4
×				5
	6	0	2	0
		1		2

Astrobee's statement is never true – an even number multiplied by an odd number results in a product that is an even number, as shown by the example calculations above.