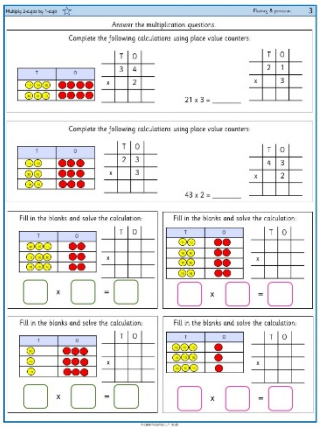
Lesson 5 – Multiplication & Division – Multiply 2-digits by 1-digit (1)

NC Objective:	Resources needed:	Vocabulary:
Write and calculate mathematical statements for multiplication and division using the multiplication tables they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods.	Differentiated Sheets Teaching Slides	Multiplication, repeated addition, formal method, partitioning, calculations, representation

Children use their understanding of repeated addition to represent a two-digit number multiplied by a one-digit number with concrete manipulatives. They use the formal method of column multiplication alongside the concrete representation. They also apply their understanding of partitioning to represent and solve calculations.
In this step, children explore multiplication with no exchange and will use place value counters.

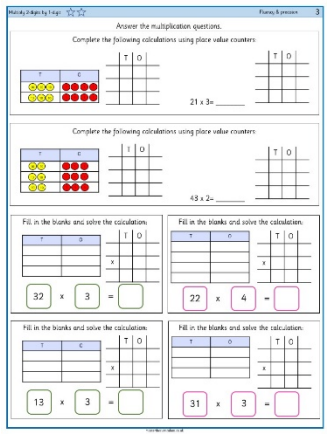
Key Questions:
How does multiplication link to addition?
How does partitioning help you to multiply 2-digits by a 1-digit number?
How does the written method match the concrete representation?

★ Working Towards



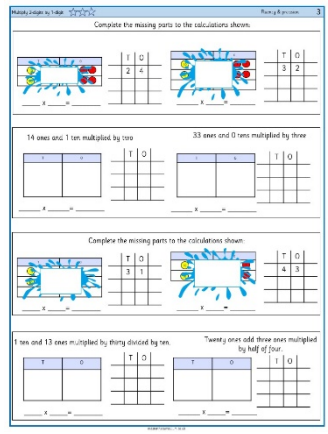
Children on this sheet have calculations represented for them, children are to use manipulatives alongside this worksheet.

★★ Working Within



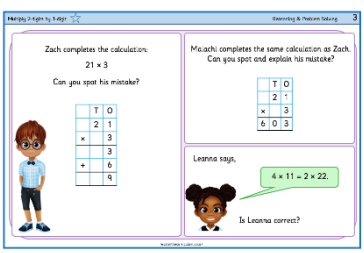
Children on this sheet have to represent their calculations and also complete place value grids to represent a calculation.

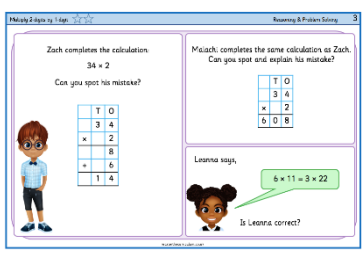
★★★ Greater Depth

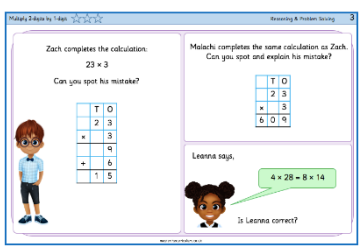


Children on this sheet use reasoning skills to complete their calculations using the information provided to them. They show calculations using a place value chart that they have constructed. Children continue to work with numbers without exchanging but work out calculations such as: Twenty ones add three ones multiplied by half of four.

Reasoning & Problem Solving







Answer the multiplication questions.

Complete the following calculations using place value counters:

T	O
10 10 10	1 1 1 1
10 10 10	1 1 1 1

	T	O	
	3	4	
x		2	

21 x 3 = _____

	T	O	
	2	1	
x		3	

Complete the following calculations using place value counters:

T	O
10 10	1 1 1
10 10	1 1 1
10 10	1 1 1

	T	O	
	2	3	
x		3	

43 x 2 = _____

	T	O	
	4	3	
x		2	

Fill in the blanks and solve the calculation:

T	O
10 10 10	1 1
10 10 10	1 1
10 10 10	1 1

	T	O	
x			

[ ] x [ ] = [ ]

Fill in the blanks and solve the calculation:

T	O
10 10	1 1
10 10	1 1
10 10	1 1
10 10	1 1

	T	O	
x			

[ ] x [ ] = [ ]

Fill in the blanks and solve the calculation:

T	O
10	1 1 1
10	1 1 1
10	1 1 1

	T	O	
x			

[ ] x [ ] = [ ]

Fill in the blanks and solve the calculation:

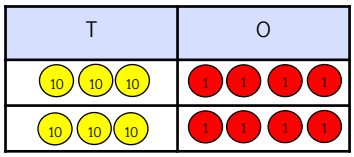
T	O
10 10 10	1
10 10 10	1
10 10 10	1

	T	O	
x			

[ ] x [ ] = [ ]

Answer the multiplication questions.

Complete the following calculations using place value counters:

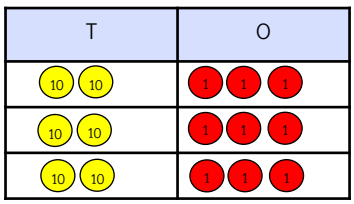


	T	O	
	3	4	
x		2	
	6	8	

21 x 3 = _____

	T	O	
	2	1	
x		3	
	6	3	

Complete the following calculations using place value counters:

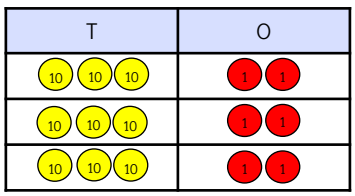


	T	O	
	2	3	
x		3	
	6	9	

43 x 2 = _____

	T	O	
	4	3	
x		2	
	8	6	

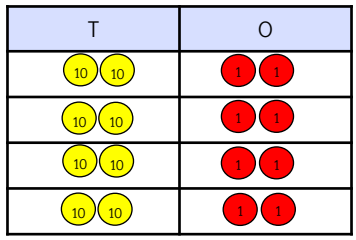
Fill in the blanks and solve the calculation:



	T	O	
	3	2	
x		3	
	9	6	

32 x 3 = 96

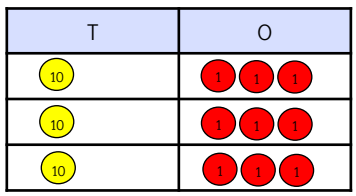
Fill in the blanks and solve the calculation:



	T	O	
	2	2	
x		4	
	8	8	

22 x 4 = 88

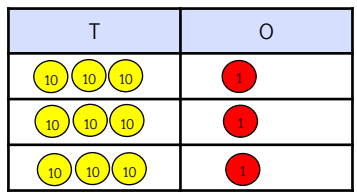
Fill in the blanks and solve the calculation:



	T	O	
	1	3	
x		3	
	3	9	

13 x 3 = 39

Fill in the blanks and solve the calculation:

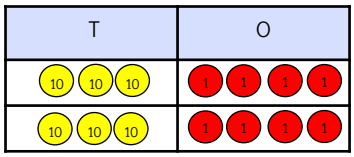


	T	O	
	3	1	
x		3	
	9	3	

31 x 3 = 93

Answer the multiplication questions.

Complete the following calculations using place value counters:

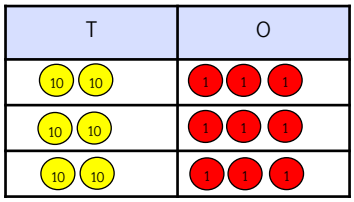


	T	O	

	T	O	

21 x 3= _____

Complete the following calculations using place value counters:



	T	O	

	T	O	

43 x 2= _____

Fill in the blanks and solve the calculation:

T	O

	T	O	
x			

32 x 3 = ☐

Fill in the blanks and solve the calculation:

T	O

	T	O	
x			

22 x 4 = ☐

Fill in the blanks and solve the calculation:

T	O

	T	O	
x			

13 x 3 = ☐

Fill in the blanks and solve the calculation:

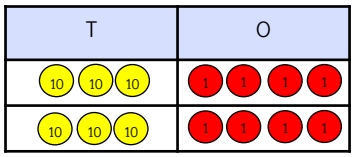
T	O

	T	O	
x			

31 x 3 = ☐

Answer the multiplication questions.

Complete the following calculations using place value counters:

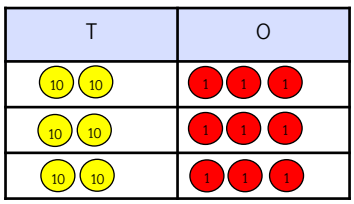


	T	O	
	3	4	
x		2	
	6	8	

21 x 3= 63

	T	O	
	2	1	
x		3	
	6	3	

Complete the following calculations using place value counters:

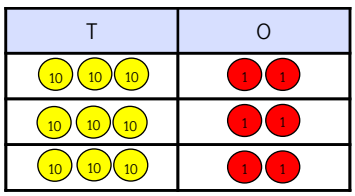


	T	O	
	2	3	
x		3	
	6	9	

43 x 2= 86

	T	O	
	4	3	
x		2	
	8	6	

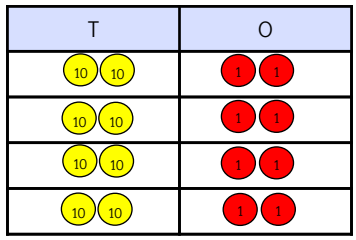
Fill in the blanks and solve the calculation:



	T	O	
	3	2	
x		3	
	9	6	

32 x 3 = 96

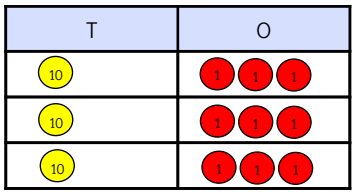
Fill in the blanks and solve the calculation:



	T	O	
	2	2	
x		4	
	8	8	

22 x 4 = 88

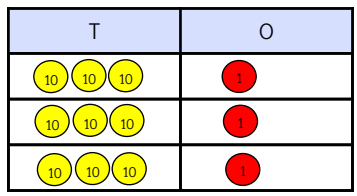
Fill in the blanks and solve the calculation:



	T	O	
	1	3	
x		3	
	3	9	

13 x 3 = 39

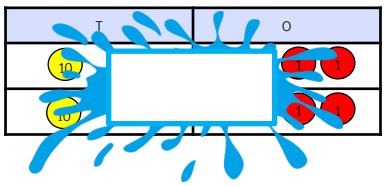
Fill in the blanks and solve the calculation:



	T	O	
	3	1	
x		3	
	9	3	

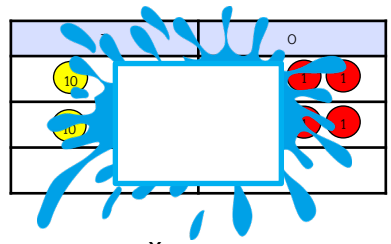
31 x 3 = 93

Complete the missing parts to the calculations shown:



	T	O	
	2	4	

_____ x _____= _____



	T	O	
	3	2	

_____ x _____= _____

13 ones and 1 ten multiplied by two

T	O

	T	O	

_____ x _____= _____

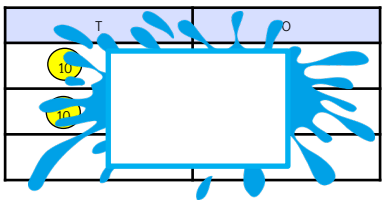
33 ones and 0 tens multiplied by three

T	O

	T	O	

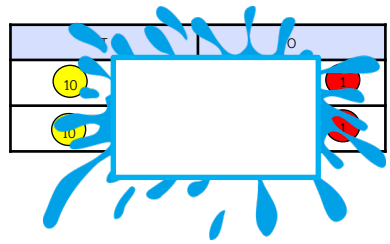
_____ x _____= _____

Complete the missing parts to the calculations shown:



	T	O	
	3	1	

_____ x _____= _____



	T	O	
	4	3	

_____ x _____= _____

1 ten and 13 ones multiplied by thirty divided by ten.

T	O

	T	O	

_____ x _____= _____

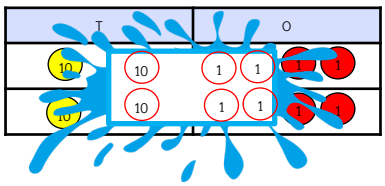
Twenty ones add three ones multiplied by half of four.

T	O

	T	O	

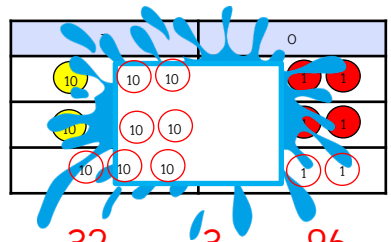
_____ x _____= _____

Complete the missing parts.



24 x 2 = 48

	T	O	
	2	4	
x		2	
	4	8	



32 x 3 = 96

	T	O	
	3	2	
x		3	
	9	6	

13 ones and 1 ten multiplied by two

T	O
10 10	1 1 1
10 10	1 1 1

23 x 2 = 46

	T	O	
	2	3	
x		2	
	4	6	

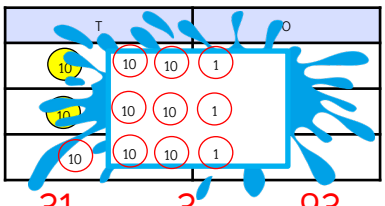
33 ones and 0 tens multiplied by three

T	O
10 10 10	1 1 1
10 10 10	1 1 1
10 10 10	1 1 1

33 x 3 = 99

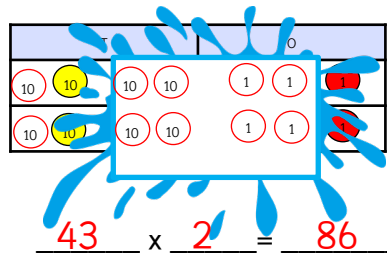
	T	O	
	3	3	
x		3	
	9	9	

Complete the missing parts to the calculations shown:



31 x 3 = 93

	T	O	
	3	1	
x		3	
	9	3	



43 x 2 = 86

	T	O	
	4	3	
x		2	
	8	6	

1 ten and 13 ones multiplied by thirty divided by ten.

T	O
10 10	1 1 1
10 10	1 1 1
10 10	1 1 1

23 x 3 = 69

	T	O	
	2	3	
x		3	
	6	9	

Twenty ones add three ones multiplied by half of four.

T	O
10 10	1 1 1
10 10	1 1 1

23 x 2 = 46

	T	O	
	2	3	
x		2	
	4	6	

Zach completes the calculation:

21 × 3

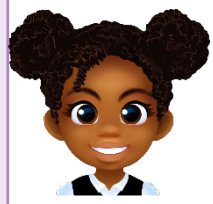
Can you spot his mistake?

	T	O
	2	1
×		3
		3
+		6
		9

Malachi completes the same calculation as Zach.
Can you spot and explain his mistake?

	T	O
	2	1
×		3
6	0	3

Leanna says,



4 × 11 = 2 × 22.

Is Leanna correct?

Multiply 2-digits by 1-digit ☆ Reasoning & Problem Solving 3

Zach completes the calculation:

21 × 3

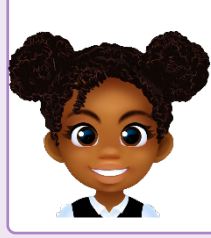
Can you spot his mistake?

	T	O
	2	1
×		3
		3
+		6
		9

Malachi completes the same calculation as Zach.
Can you spot and explain his mistake?

	T	O
	2	1
×		3
6	0	3

Leanna says,



4 × 11 = 2 × 22.

Is Leanna correct?

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Zach completes the calculation:

21 × 3

Can you spot his mistake?

	T	O
	2	1
×		3
		3
+		6
		9

	T	O
	2	1
×		3
		3
+	6	0
	6	3

Zach has multiplied 2 by 3 rather than 20 by 3. As it is the expanded form it should look like the calculation above.

Malachi completes the same calculation as Zach. Can you spot and explain his mistake?

	T	O
	2	1
×		3
6	0	3

Malachi has written 60 where he should have just put a 6 because he is multiplying 2 tens by 3 which is 6 tens. The answer should be 63.

Leanna says,

4 × 11 = 2 × 22.

Is Leanna correct?

True. Both multiplications are equal to 44. Children may explore that one number has halved and the other has doubled.

Multiply 2-digits by 1-digit ☆ Answers Reasoning & Problem Solving 3

Zach completes the calculation:

21 × 3

Can you spot his mistake?

	T	O
	2	1
×		3
		3
+		6
		9

	T	O
	2	1
×		3
		3
+	6	0
	6	3

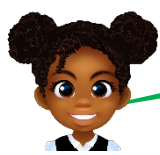
Zach has multiplied 2 by 3 rather than 20 by 3. As it is the expanded form it should look like the calculation above.

Malachi completes the same calculation as Zach. Can you spot and explain his mistake?

	T	O
	2	1
×		3
6	0	3

Malachi has written 60 where he should have just put a 6 because he is multiplying 2 tens by 3 which is 6 tens. The answer should be 63.

Leanna says,



4 × 11 = 2 × 22.

Is Leanna correct?

True. Both multiplications are equal to 44. Children may explore that one number has halved and the other has doubled.

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Zach completes the calculation:

34 × 2

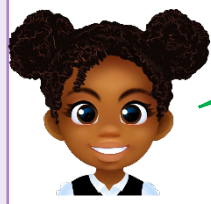
Can you spot his mistake?

	T	O
	3	4
×		2
		8
+		6
	1	4

Malachi completes the same calculation as Zach.
Can you spot and explain his mistake?

	T	O
	3	4
×		2
6	0	8

Leanna says,



6 × 11 = 3 × 22

Is Leanna correct?

Multiply 2-digits by 1-digit ☆☆ Reasoning & Problem Solving 3

Zach completes the calculation:

34 × 2

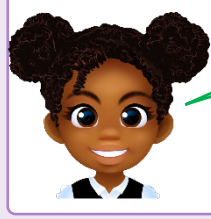
Can you spot his mistake?

	T	O
	3	4
×		2
		8
+		6
	1	4

Malachi completes the same calculation as Zach.
Can you spot and explain his mistake?

	T	O
	3	4
×		2
6	0	8

Leanna says,



6 × 11 = 3 × 22

Is Leanna correct?

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Zach completes the calculation:

34 × 2

Can you spot his mistake?

	T	O
	3	4
×		2
		8
+		6
	1	4

	T	O
	3	4
×		2
		8
+	6	0
	6	8

Zach has multiplied 2 by 3 rather than 30 by 2. As it is the expanded form it should look like the calculation above.

Malachi completes the same calculation as Zach. Can you spot and explain his mistake?

	T	O
	3	4
×		2
6	0	8

Malachi has written 60 where he should have just put a 6 because he is multiplying 3 tens by 2 which is 6 tens. The answer should be 68.

Leanna says,

6 × 11 = 3 × 22

Is Leanna correct?

True. Both multiplications are equal to 66. Children may explore that one number has halved and the other has doubled.

Multiply 2-digits by 1-digit ☆☆ Answers Reasoning & Problem Solving 3

Zach completes the calculation:

34 × 2

Can you spot his mistake?

	T	O
	3	4
×		2
		8
+		6
	1	4

	T	O
	3	4
×		2
		8
+	6	0
	6	8

Zach has multiplied 2 by 3 rather than 30 by 2. As it is the expanded form it should look like the calculation above.

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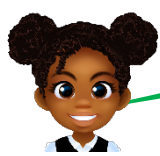
	T	O
	3	4
×		2
6	0	8

Malachi has written 60 where he should have just put a 6 because he is multiplying 3 tens by 2 which is 6 tens. The answer should be 68.

Leanna says,



6 × 11 = 3 × 22

Is Leanna correct?

True. Both multiplications are equal to 66. Children may explore that one number has halved and the other has doubled.

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Zach completes the calculation:

23×3

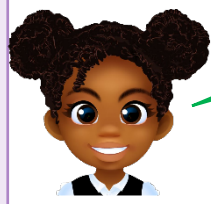
Can you spot his mistake?

	T	O
	2	3
×		3
		9
+		6
	1	5

Malachi completes the same calculation as Zach.
Can you spot and explain his mistake?

	T	O
	2	3
×		3
6	0	9

Leanna says,



$4 \times 28 = 8 \times 14$

Is Leanna correct?

Multiply 2-digits by 1-digit ☆☆☆ Reasoning & Problem Solving 3

Zach completes the calculation:

23×3

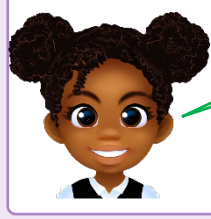
Can you spot his mistake?

	T	O
	2	3
×		3
		9
+		6
	1	5

Malachi completes the same calculation as Zach.
Can you spot and explain his mistake?

	T	O
	2	3
×		3
6	0	9

Leanna says,



$4 \times 28 = 8 \times 14$

Is Leanna correct?

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Zach completes the calculation:

23 × 3

Can you spot his mistake?

	T	O
	2	3
×		3
		9
+		6
	1	5

	T	O
	2	3
×		3
		9
+	6	0
	6	9

Zach has multiplied 2 by 3 rather than 20 by 3. As it is the expanded form it should look like the calculation above.

Malachi completes the same calculation as Zach. Can you spot and explain his mistake?

	T	O
	2	3
×		3
6	0	9

Malachi has written 60 where he should have just put a 6 because he is multiplying 2 tens by 3 which is 6 tens. The answer should be 69.

Leanna says,

4 × 28 = 8 × 14

Is Leanna correct?

True. Both multiplications are equal to 112. Children may explore that one number has halved and the other has doubled.

Multiply 2-digits by 1-digit ☆☆☆ Answers Reasoning & Problem Solving 3

Zach completes the calculation:

23 × 3

Can you spot his mistake?

	T	O
	2	3
×		3
		9
+		6
	1	5

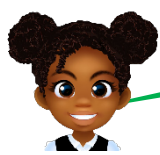
Zach has multiplied 6 by 2 rather than 20 by 3.

Malachi completes the same calculation as Zach. Can you spot and explain his mistake?

	T	O
	2	3
×		3
6	0	9

Malachi has written 60 where he should have just put a 6 because he is multiplying 2 tens by 3 which is 6 tens. The answer should be 69.

Leanna says,



4 × 28 = 8 × 14

Is Leanna correct?

True. Both multiplications are equal to 112. Children may explore that one number has halved and the other has doubled.

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