

Multiplication 'Reasoning and Problem Solving' L.O. Solve any 1d x up to 4d = Remember to:	Square Hexagon	Wednesday	13/01/21
		What I think	What my teacher thinks
Write neatly; one clear digit in a square, ruler for lines.		☐	☐
Use knowledge gained to answer questions and identify errors.		☐	☐
Use manipulatives (or draw counters) on a Place Value Grid.		☐	☐
Add the counters in each column and exchange if needed.		☐	☐
Write the larger number on the top line.		☐	☐
Write the 1-digit number below the larger number, noting Place Value.		☐	☐
Multiply each digit of the larger number by the single digit below and record the result.		☐	☐
Add the results to give an answer.		☐	☐
Check that the answer looks reasonable.		☐	☐
Do me first: 67 x 3 =			

Using the knowledge that you have gained, identify errors and answer questions to demonstrate your understanding. You may need to complete calculations or write an explanation. Some of your responses might include an element of 'trial and improvement' – i.e. have a go and see what happens!

Here are three incorrect multiplications.

	T	O			T	O
	6	1			7	4
x		5		x		7
	3	5			4	9
						8

	T	O
	2	6
x		4
8	2	4

Correct the multiplications.

Always, sometimes, never

- When multiplying a two-digit number by a one-digit number, the product has 3 digits.
- When multiplying a two-digit number by 8 the product is odd.
- When multiplying a two-digit number by 7 you need to exchange.

Prove it.

Spot the mistake

Alex and Dexter have both completed the same multiplication.



Alex

	H	T	O
	2	3	4
×			6
1	2	0	4

2 2



Dexter

	H	T	O
	2	3	4
×			6
1	4	0	4

2 2

Who has the correct answer?

What mistake has been made by one of the children?

Teddy and his mum were having a reading competition.
In one month, Teddy read 814 pages.



His mum read 4 times as many pages as Teddy.

How many pages did they read altogether?

How many fewer pages did Teddy read?
Use the bar model to help.

Teddy

814

Mum

814	814	814	814
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Multiplication 'Reasoning and Problem Solving' L.O. Solve any 1d x up to 4d = Remember to:	Pentagon Quadrilateral	Wednesday	13/01/21
		What I think	What my teacher thinks
Write neatly; one clear digit in a square, ruler for lines.		☐	☐
Use knowledge gained to answer questions and identify errors.		☐	☐
Use manipulatives (or draw counters) on a Place Value Grid.		☐	☐
Add the counters in each column and exchange if needed.		☐	☐
Write the larger number on the top line.		☐	☐
Write the 1-digit number below the larger number, noting Place Value.		☐	☐
Multiply each digit of the larger number by the single digit below and record the result.		☐	☐
Add the results to give an answer.		☐	☐
Check that the answer looks reasonable.		☐	☐
Do me first: 467 x 8 =			

Using the knowledge that you have gained, identify errors and answer questions to demonstrate your understanding. You may need to complete calculations or write an explanation. Some of your responses might include an element of 'trial and improvement' – i.e. have a go and see what happens!

Here are three incorrect multiplications.

	T	O			T	O
	6	1			7	4
x		5		x		7
	3	5			4	9
						8

	T	O
	2	6
x		4
8	2	4

Correct the multiplications.

Always, sometimes, never

- When multiplying a two-digit number by a one-digit number, the product has 3 digits.
- When multiplying a two-digit number by 8 the product is odd.
- When multiplying a two-digit number by 7 you need to exchange.

Prove it.

Spot the mistake

Alex and Dexter have both completed the same multiplication.



Alex

	H	T	O
	2	3	4
x			6
1	2	0	4

2 2



Dexter

	H	T	O
	2	3	4
x			6
1	4	0	4

2 2

Who has the correct answer?

What mistake has been made by one of the children?

Alex calculated $1,432 \times 4$

Here is her answer.

	Th	H	T	O
	1	4	3	2
x				4
	4	16	12	8

$$1,432 \times 4 = 416,128$$

Can you explain what Alex has done wrong?

Teddy and his mum were having a reading competition.
In one month, Teddy read 814 pages.



His mum read 4 times as many pages as Teddy.

How many pages did they read altogether?

How many fewer pages did Teddy read?

Use the bar model to help.

Teddy

814

Mum

814

814

814

814

Multiplication 'Reasoning and Problem Solving' L.O. Solve any 1d x up to 4d = Remember to:	Triangle	Wednesday	13/01/21
		What I think	What my teacher thinks
Write neatly; one clear digit in a square, ruler for lines.		☐	☐
Use knowledge gained to answer questions and identify errors.		☐	☐
Use manipulatives (or draw counters) on a Place Value Grid.		☐	☐
Add the counters in each column and exchange if needed.		☐	☐
Write the larger number on the top line.		☐	☐
Write the 1-digit number below the larger number, noting Place Value.		☐	☐
Multiply each digit of the larger number by the single digit below and record the result.		☐	☐
Add the results to give an answer.		☐	☐
Check that the answer looks reasonable.		☐	☐
Do me first: 3467 x 8 =			

Using the knowledge that you have gained, identify errors and answer questions to demonstrate your understanding. You may need to complete calculations or write an explanation. Some of your responses might include an element of 'trial and improvement' – i.e. have a go and see what happens!

Here are three incorrect multiplications.

	T	O			T	O
	6	1			7	4
x		5		x		7
	3	5			4	9
					8	

Correct the multiplications.

Always, sometimes, never

- When multiplying a two-digit number by a one-digit number, the product has 3 digits.
- When multiplying a two-digit number by 8 the product is odd.
- When multiplying a two-digit number by 7 you need to exchange.

Prove it.

Spot the mistake

Alex and Dexter have both completed the same multiplication.



Alex

	H	T	O
	2	3	4
x			6
1	2	0	4

2 2



Dexter

	H	T	O
	2	3	4
x			6
1	4	0	4

2 2

Who has the correct answer?

What mistake has been made by one of the children?

Teddy and his mum were having a reading competition.
In one month, Teddy read 814 pages.



His mum read 4 times as many pages as Teddy.

How many pages did they read altogether?

How many fewer pages did Teddy read?

Use the bar model to help.

Teddy

814

Mum

814	814	814	814
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Alex calculated $1,432 \times 4$

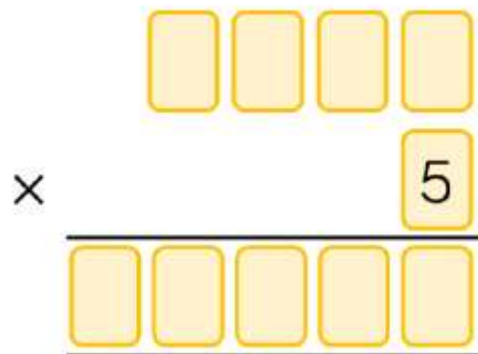
Here is her answer.

	Th	H	T	O
	1	4	3	2
x				4
	4	16	12	8

$$1,432 \times 4 = 416,128$$

Can you explain what Alex has done wrong?

Can you work out the missing numbers using the clues?



- The 4 digits being multiplied by 5 are consecutive numbers.
- The first 2 digits of the product are the same.
- The fourth and fifth digits of the answer add to make the third.