



MATHS

MULTIPLICATION

L.O To multiply together 3 numbers.

1. Recall multiplication facts up to the 9 times tables
2. Recall multiplication facts up to the 9 times tables
3. **Multiply together 3 numbers**
4. **To solve missing number problems.**

WARM UP

• Double the following numbers :

- 6
- 8
- 12
- 60
- 84
- 212

Half the following numbers :

- 12
- 100
- 50
- 70
- 1000
- 250

MULTIPLICATION

2×3

I have 2 lots of 3

How many do I have?



PRACTISE

- 3×4

- 1×6

- 2×5

- 5×12

- 11×6

- 9×8

MULTIPLYING 3 NUMBERS

$$4 \times 4 \times 4$$

$$3 \times 2 \times 3$$

How do you think we would solve these?

$$3 \times 2 \times 3$$


Multiply the first two
numbers together first

$$3 \times 2 \times 3$$



$$3 \times 2 = 6$$

Then multiply your
answer by the final
number

$$3 \times 2 \times 3$$


$$6 \times 3$$

So what is my answer?

PRACTISE TIME

$$5 \times 3 =$$

$$4 \times 2 =$$

$$2 \times 6 =$$

$$1 \times 5 \times 3 =$$

$$4 \times 2 \times 3 =$$

$$3 \times 2 \times 6 =$$

$$\underline{\quad} \times 8 \times 4 = 128$$

$$4 \times \underline{\quad} \times 3 = 24$$

$$3 \times \underline{\quad} \times 4 = 48$$

L.O TO MULTIPLY 3 NUMBERS TOGETHER .

1. $3 \times 3 =$
2. $3 \times 4 =$
3. $6 \times 2 =$
4. $5 \times 2 =$
5. $3 \times 2 =$
6. $4 \times 1 =$

1. $4 \times 6 =$
2. $3 \times 8 =$
3. $4 \times 7 =$
4. $6 \times 5 =$
5. $8 \times 4 =$
6. $2 \times 12 =$

1. $4 \times 2 \times 3 =$
2. $3 \times 2 \times 4 =$
3. $4 \times 6 \times 4 =$
4. $3 \times 2 \times 5 =$
5. $3 \times 7 \times 5 =$
6. $4 \times 8 \times 4 =$

1. $4 \times 4 \times 6 =$
2. $2 \times ? \times 2 = 24$
3. $3 \times ? \times 6 = 72$
4. $? \times 6 \times 9 = 432$
5. $? \times 6 \times ? = 96$
6. $? \times 7 \times ? = 567$

Mastery tip- product means multiply! 24 as a product of 3 numbers means 3 numbers multiply to make 24

MASTERY

Mastery Activity

True or False

$$6 \times 8 = 6 \times 4 \times 2$$

$$6 \times 8 = 6 \times 4 + 4$$

Explain your reasoning.

Can you write the number 24 as a product of three numbers?

Day 2

D2L.O: To recognise factor pairs of numbers.

To understand what a factor pair

To find factor pairs of given numbers.

Investigate numbers with the most factors.

<https://www.bbc.co.uk/bitesize/topics/zfq7hyc/articles/zp6wfcw>

STARTER

$$4 + \underline{\quad} = 10$$

$$25 + 75 = \underline{\quad} + 50$$

$$3456 + 2316 = \underline{\quad\quad} + 1000$$

FACTOR PAIRS

- What are factor pairs?

Factor pairs are **two numbers that, when multiplied together, equal another number, or product**. For instance, 1 and 12, 2 and 6, and 3 and 4 are the three factor pairs for the number 12.

- When can we use them ?

WHAT ARE THE FACTOR PAIRS OF 6?

$$1 \times 6 = 6$$

$$2 \times 3 = 6$$

$$3 \times 2 = 6$$

$$6 \times 1 = 6$$

Always start in order... this is working systematically!

WE CAN ALSO SHOW FACTOR PAIRS WITH A RAINBOW



Let's practise by finding the factor pairs for 18.

FIND ALL OF THE FACTOR PAIRS FOR THESE NUMBERS

1. 4×5

2. 1×8

3. 2×6

4. 4×6

5. 3×5

6. 3×6

1. 12

2. 24

3. 36

4. 42

5. 48

6. 63

1. 36

2. 48

3. 56

4. 63

5. 72

6. 96

What number under 50 has the most factor pairs?

Mastery:

D3LO: Use place value, known and derived facts to multiply and divide mentally
recall times tables facts for 12 times tables
multiply by 1 and 0
solve missing number problems

STARTER

- 3×2
- $3 \times 2 \times 5$
- $4 \times 6 \times 1$

- $3 \times 4 \times 5 \times 0 \times 2 \times 1$

WHAT HAPPENS WHEN WE MULTIPLY BY 1 AND 0?

- 3×1
 - 5×1
 - 6×0
 - 4×0
-
- What do you notice?
 - What about $4 \times 3 \times 0 \times 2 \times 1$
-
- Whenever you multiply by 0, the answer will always be 0!

MISSING NUMBER PROBLEMS

- How would you solve these problems?

$$\square \times 1 = 13$$

$$12 \times 0 = \square$$

$$3 \times 2 \times \square = 18$$

YOUR TASK

1. $3 \times 5 =$
2. $4 \times 4 =$
3. $2 \times 2 =$
4. $5 \times 5 =$
5. $3 \times 7 =$
6. $4 \times 8 =$

1. $4 \times 11 =$
2. $6 \times 8 =$
3. $5 \times 7 =$
4. $6 \times 3 =$
5. $8 \times 9 =$
6. $3 \times 12 =$

1. $2 \times 0 =$
2. $3 \times 1 =$
3. $6 \times 0 =$
4. $11 \times _ = 11$
5. $7 \times _ = 0$
6. $4 \times _ \times 4 = 16$

1. $4 \times _ = 0$
2. $13 \times _ = 13$
3. $3 \times _ \times 6 = 0$
4. $1 \times _ \times _ = 25$
5. $_ \times _ \times _ = 24$
6. $_ \times _ \times _ = 36$

Try to reach the target number below by multiplying three of the numbers together. Cross out any numbers you don't use.

Target number: 144

1 5 3 0 6 8

DAY 4

DAY 4

- D4LO: Multiply two digit and three digit numbers by a one digit number
- represent a 3 digit number using counters
- multiply a 2 digit by a 1 digit number using concrete objects
- multiply a 3 digit number by a 1 digit number using concrete objects
- .

COUNTING STICK STARTER

STARTER- MULTIPLYING BY 0

What is the effect of multiplying by 0?

$$4 \times 0 =$$

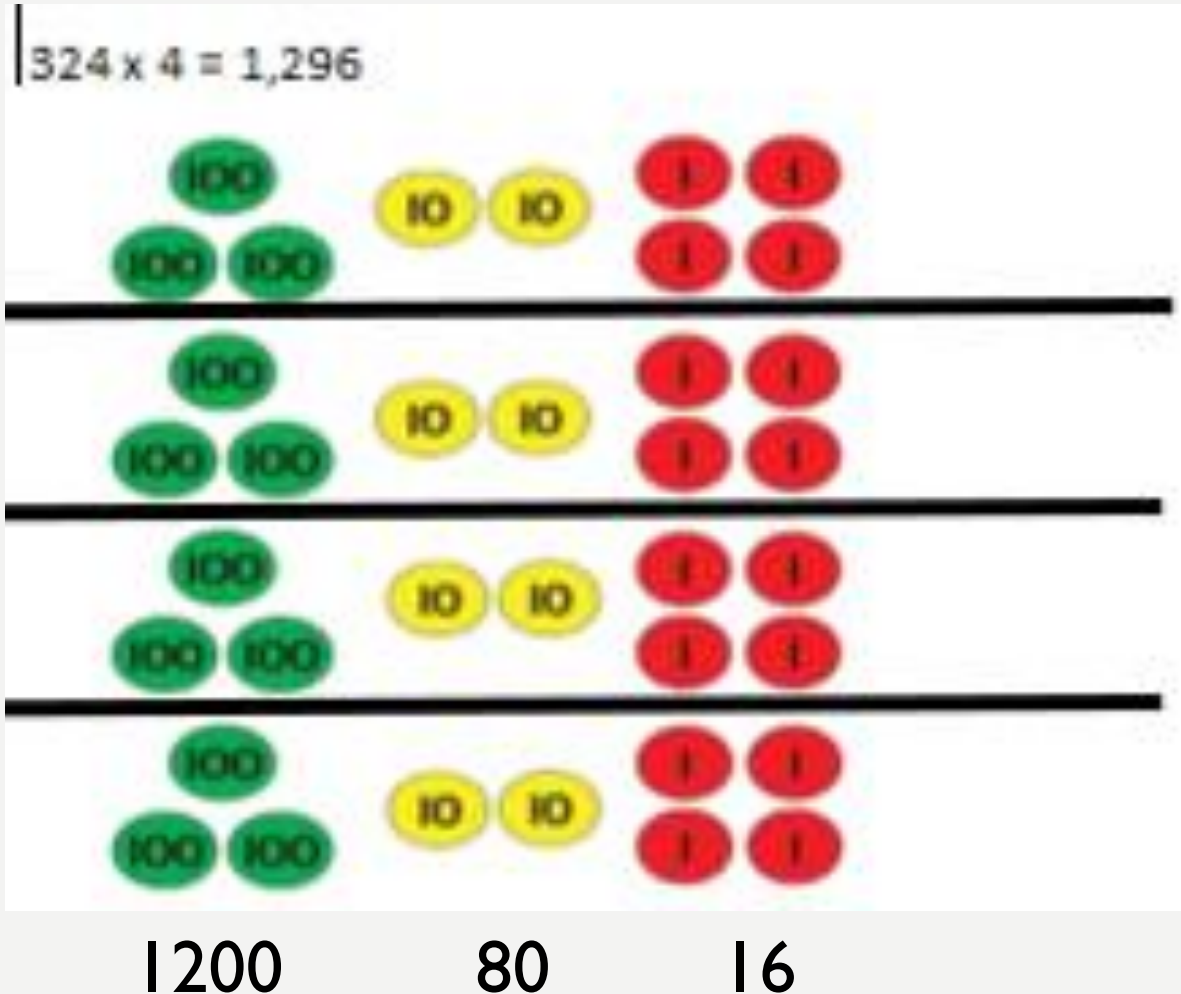
$$8 \times 0 =$$

What do you notice? Does it always work?

$$3 \times 4 \times 7 \times 0 \times 2 \times 5 =$$

HOW WOULD YOU SOLVE

$324 \times 4 =$



Set out the counters and then add up the total on what is each column.

$$1200 + 80 + 16 = 1296$$

TASK...

Word problems

1. 24×2

2. 31×3

3. 22×5

4. 35×3

5. 42×2

6. 34×4

1. 46×4

2. 73×3

3. 24×8

4. 31×5

5. 52×6

6. 81×3

1. 213×5

2. 247×8

3. 124×6

4. 421×7

5. 387×8

6. 642×3

Answer your questions on your whiteboards, using the place value counters to represent each number.

Once you have completed your questions, put your hand up for photo.

Mastery activity

Penny says a two digit number multiplied by a one digit number will always give a two digit answer.

Is she correct?

Justify your answer.

DAY 5

COUNTING STICK STARTER

Subtraction recap

$$18 - 9$$

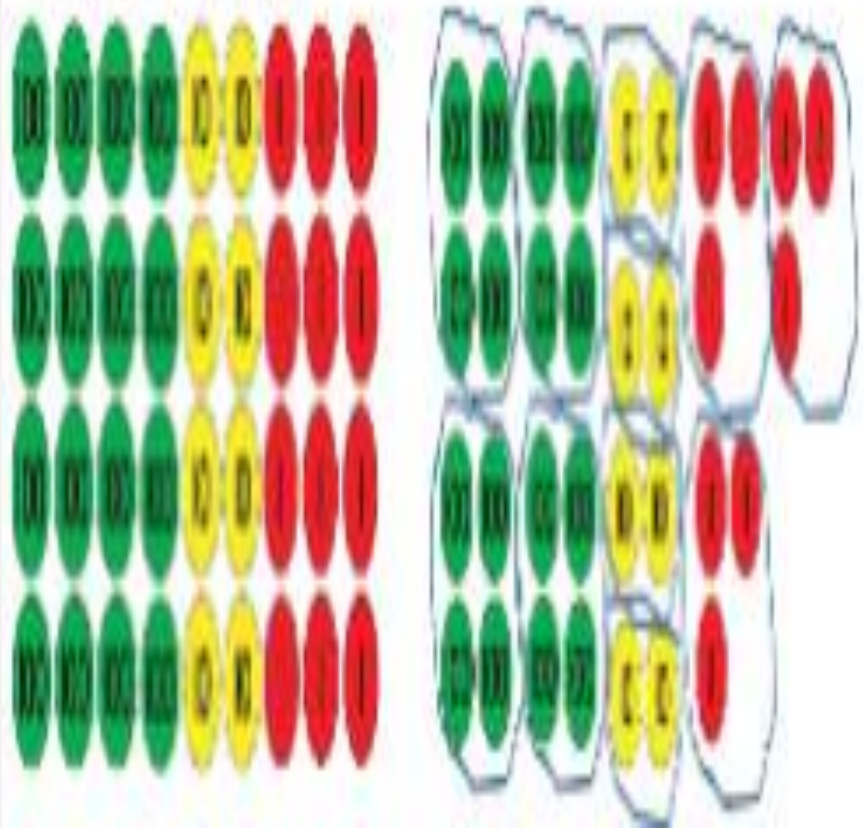
$$456 - 124$$

$$3407 - 4311$$



HOW WOULD YOU SOLVE $423 \times 4 =$

$$423 \times 4 = 1,692$$



Draw the counters or 'xs' in groups of 4 and then add up all of your H, T and O's.

	Th	H	T	O
+100				
1000		600	90	2

PRACTISE ON YOUR WHITEBOARDS

- 22×4

- 45×6

- 134×7

THE WRITTEN METHOD

HOW WOULD YOU SOLVE 67 X 6 IN A WRITTEN METHOD?

$$\begin{array}{r} 67 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 67 \\ \times 6 \\ \hline 42 \\ 360 \\ \hline 402 \\ \hline 1 \end{array}$$

(7 x 6)

(60 x 6)

I know that:

$$6 \times 6 = 36$$

$60 \times 6 = 360$ (making it 10 times bigger)

HOW WOULD YOU SOLVE 267 X 6 IN A WRITTEN METHOD?

$$\begin{array}{r} 267 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 267 \\ \times 6 \\ \hline 42 \\ 360 \\ 1,200 \\ \hline 1,602 \\ \hline \end{array}$$

I know that:

$$6 \times 6 = 36$$

$$60 \times 6 = 360 \text{ (making it 10 times bigger)}$$

$$(7 \times 6)$$

$$(60 \times 6)$$

$$(200 \times 6)$$

$$2 \times 6 = 12$$

$$20 \times 6 = 120 \text{ (making it 10 times bigger)}$$

$$200 \times 6 = 1200 \text{ (making it 100 times bigger)}$$

TASK...

Using the pictorial method on a whiteboard

1. 1.42×4

2. 2.23×6

3. 3.52×5

4. 4.121×6

5. 5.232×5

6. 6.312×3

Using the pictorial method on a whiteboard

1. 1.84×4

2. 2.324×6

3. 3.453×7

4. 4.624×4

5. 5.345×8

Using the written method

1. 1.53×8

2. 2.24×8

3. 3.23×9

4. 4.53×7

5. 5.91×6

Once you have completed your question, put your hand up for photo.

Mastery activity

Penny says a two digit number multiplied by a one digit number will always give a two digit answer.
Is she correct?
Justify your answer.