



Year 3
Maths
9th November 2020



Lesson Aims

- **LO: I can draw an array to help solve a multiplication number sentence.**
- SC: I can use my knowledge of times tables to help me.
- I can draw the correct number of rows/columns.
- I can show that multiplication can be done in any order.
- I can know that multiplication and division are inverse operations.



Fluency Starter

- When add three numbers together, what strategies can we use to help?

$$2 + 8 + 5 =$$



Fluency Starter Answer

- When add three numbers together, what strategies can we use to help?

$$2 + 8 + 5 =$$

Look for patterns

Use your knowledge of number bonds



Fluency Starter

- Use your number bonds and any patterns you can see, answer these:
- $5 + 8 + 12 =$
- $11 + 7 + 9 =$
- $35 + 28 + 12 =$
- $236 + 14 + 11 =$



Fluency Starter Answers

- Use your number bonds and any patterns you can see, answer these:
- $5 + 8 + 12 = 25$
- $11 + 7 + 9 = 27$
- $35 + 28 + 12 = 75$
- $236 + 14 + 11 = 261$

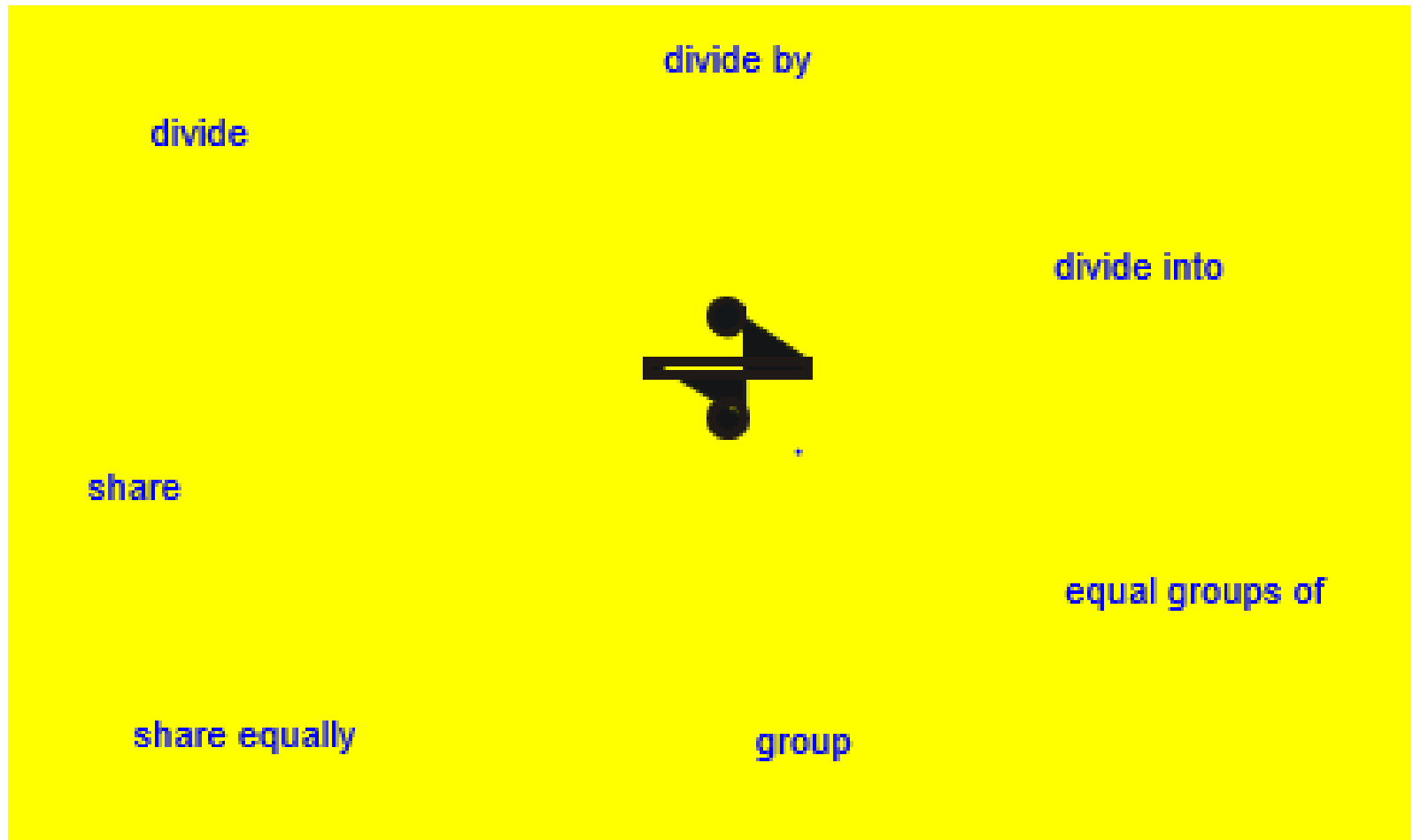


Main Teaching – there are lots of words for the X symbol





Main Teaching – there are lots of words for the \div symbol





Main teaching

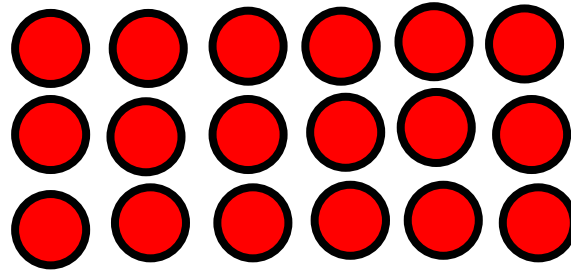
- Mathematicians are lazy!
- How could you write $5 + 5 + 5 + 5 + 5 + 5 + 5 + 5 + 5 =$ in a more efficient way?
- **$5 \times 9 =$**



What is this? What does it tell us?

What numbers can you see in it?

What number sentence could you use to explain it?



Multiplication is **commutative**.

The answer is the same which ever order the numbers go in.



What is this? What can it be used for?

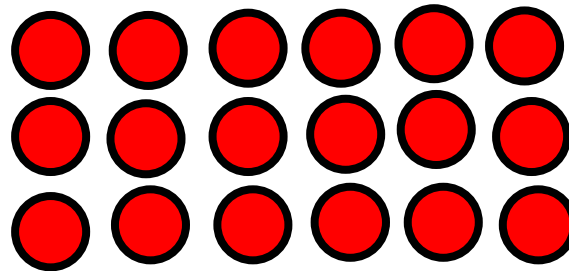
It's an array. It can be used to help us with multiplication and division facts.

What numbers can you see in it?

6, 3, 18

What number sentence could you use to explain it?

$6 \times 3 = 18$, $3 \times 6 = 18$, $18 \div 6 = 3$, $18 \div 3 = 6$



Multiplication is **commutative**.

The answer is the same which ever order the numbers go in.



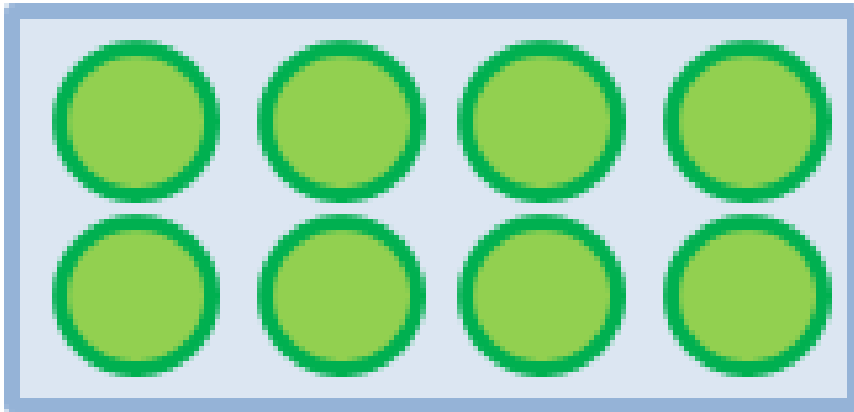
Fluency

- Draw an array for $4 \times 2 =$



Fluency

- Draw an array for $4 \times 2 =$

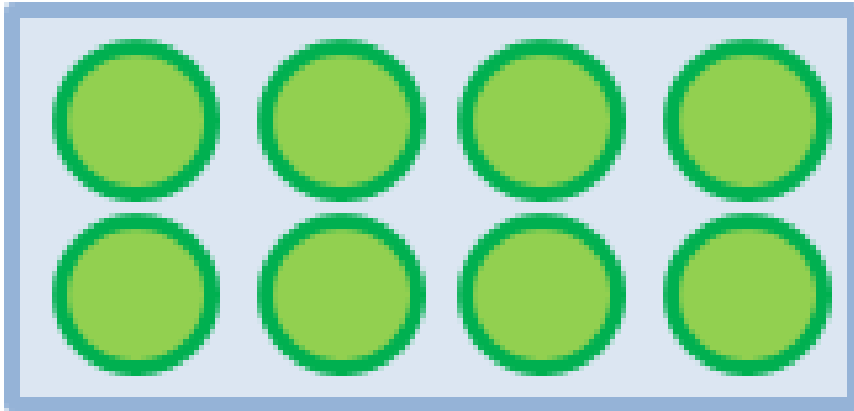


- What other number sentences does it represent?



Fluency Answers

- Draw an array for $4 \times 2 = 8$



- What other number sentences does it represent?

$$2 \times 4 = 8$$

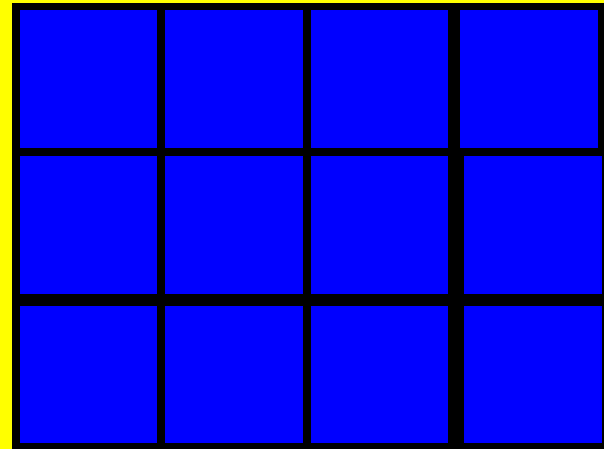
$$8 \div 4 = 2$$

$$8 \div 2 = 4$$



Fluency Activity

What number sentences are shown by this array?





Fluency Activity Answer

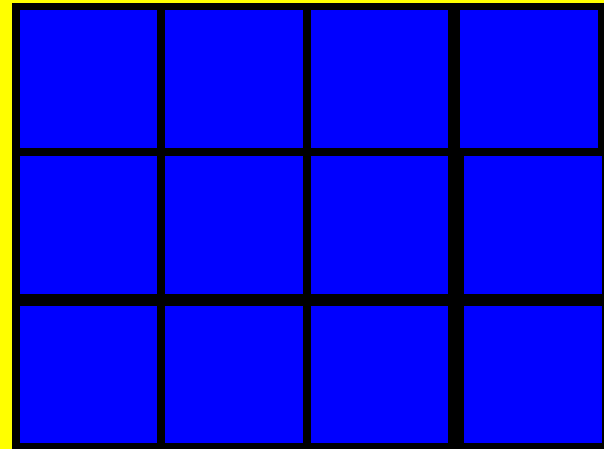
What number sentences are shown by this array?

$$3 \times 4 = 12$$

$$4 \times 3 = 12$$

$$12 \div 3 = 4$$

$$12 \div 4 = 3$$





Activity

- Draw the array.
- Write all the possible \times and \div number sentences that match that array.

- $7 \times 2 =$

- $6 \times 5 =$

- $5 \times 3 =$

4) $4 \times 5 =$

5) $9 \times 2 =$

6) $8 \times 4 =$



Activity answers

- Draw the array.
- Write all the possible \times and \div number sentences that match that array.

• 1) $7 \times 2 =$ **14**

• 2) $6 \times 5 =$ **30**

• 3) $5 \times 3 =$ **15**

4) $4 \times 5 =$ **20**

5) $9 \times 2 =$ **18**

6) $8 \times 4 =$ **32**



Review

- Match these number sentences to the correct arrays



$$2 \times 7 = 14$$



$$32 \div 8 = 4$$

$$5 \times 3 = 15$$