



THIRD SPACE  
LEARNING

# Can I multiply three numbers together?

## Success Criteria

- I can reorder numbers in a multiplication calculation to make a calculation easier to complete (I know that multiplication is commutative)
- I can explain my choice of order



To understand how to multiply three numbers together

**In focus task**

**Complete the multiplication square.**

x	8	4	3	6
2				
		20		
3			9	
				42

Answers



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**When I complete a multiplication question, such as the one below, does the order I completed the multiplication change the product?**

$$6 \times 2$$

Explain your answer.

As we know multiplication is commutative, the order a multiplication calculation is completed does not change the product. This is the 'Associative Law'.

For example:

$$6 \times 2 = 12$$

$$2 \times 6 = 12$$

Answers

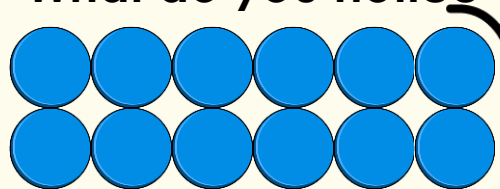


# To understand how to multiply three numbers together

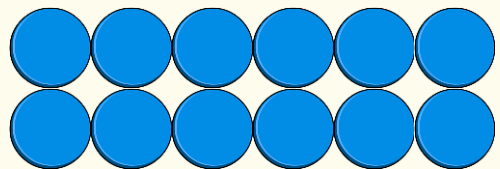
## Guided Practice:

Here are two ways to complete  $6 \times 2 \times 3$ .

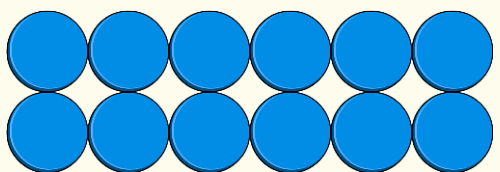
**What do you notice about the two methods?**



$$6 \times 2 =$$

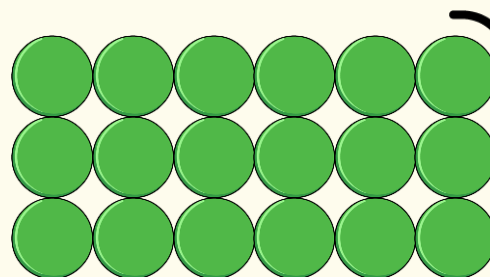


$$6 \times 2 =$$

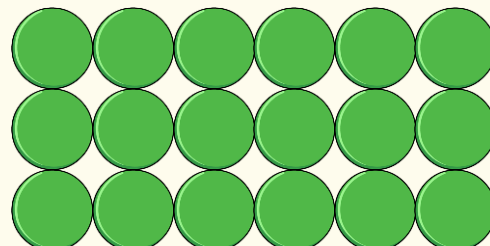


$$6 \times 2 =$$

$$6 \times 2 \times 3 = 3 \times \underline{\quad} =$$



$$6 \times 3 =$$



$$6 \times 3 =$$

$$6 \times 3 \times 2 = 2 \times \underline{\quad} =$$

Answers



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**Independent Practice:**

**1.** Use counters, cubes or pictorial representations to complete these calculations.

Remember you can complete them in any order.

**a.**  $4 \times 2 \times 8$

**b.**  $4 \times 3 \times 8$

**c.**  $1 \times 7 \times 3$

**d.**  $2 \times 3 \times 7$

**e.**  $6 \times 3 \times 3$

**f.**  $6 \times 9 \times 1$



## To understand how to multiply three numbers together

### Guided Practice:

The astronaut are discussing how they will solve this calculation.

$$5 \times 8 \times 2$$

### Which method would you use?

Explain your answer.



$$5 \times 8 = 40$$
$$40 \times 2 = 80$$

$$5 \times 2 = 10$$
$$8 \times 10 = 80$$



$$8 \times 2 = 16$$
$$16 \times 5 = 80$$





To understand how to multiply three numbers together

**Independent Practice:**

**2.** Complete the calculations and show your workings out.

**a.**  $4 \times 3 \times 5$

**b.**  $5 \times 4 \times 6$

**c.**  $3 \times 2 \times 9$

**d.**  $9 \times 2 \times 6$

**e.**  $7 \times 3 \times 2$

**f.**  $4 \times 7 \times 3$



To understand how to multiply three numbers together

**Guided Practice:**

The astronaut has picked 3 different digit cards.

She says, "The product of my three cards is 30."



**Which 3 different digit cards could the astronaut have?**

She could have 1, 5 and 6 or 2, 3 and 5.

Answers

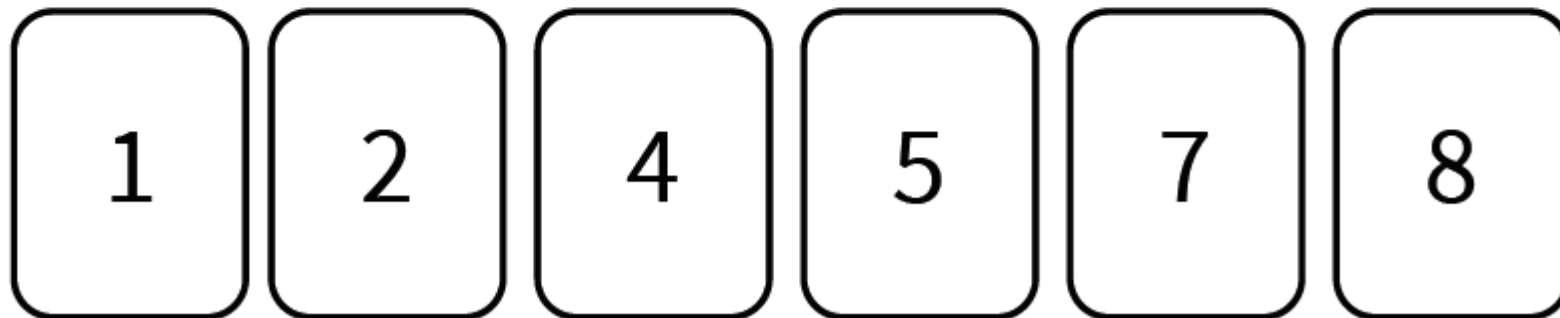


To understand how to multiply three numbers together

**Independent Practice:**

- 3.** Using these digit cards, make at least 6 different calculations.  
Which calculations have the same product?

$$\underline{\quad} \times \underline{\quad} \times \underline{\quad} = \underline{\quad}$$





To understand how to multiply three numbers together

### Light Bulb Challenge

How many different ways could you arrange this calculation to find the product?

$$4 \times 6 \times 3$$

$$4 \times 6 \times 3$$

$$4 \times 3 \times 6$$

$$6 \times 3 \times 4$$

$$6 \times 4 \times 3$$

$$3 \times 6 \times 4$$

$$3 \times 4 \times 6$$

The product is 72.

Answers