

# Maths

## Multiplication and Division

# Calculations with 0 and 1



# Aim

- I can multiply 0 and 1 and divide by 1.

# Success Criteria

- I know different words for the number 0 and understand what it represents.
- I can use drawings and objects to show why multiplying by 0 or 1 is different from adding and subtracting 0 or 1.
- I can write rules for multiplying by 0 or 1 and dividing by 1.
- I can use what I have learnt to solve word problems.

# Corners



Look around the room. Who can find the labels **multiplication**, **division**, **addition** and **subtraction**?

You will be shown a word or problem to read.

If you think the word means 'subtraction' or you need to use subtraction to solve the problem, then go and stand silently in that corner.

Are you ready? Here we go...

# Corners



share



# Corners



sum of

# Corners



Find the  
Product of  
3 and 6.



# Corners



Split the chocolate bar into sets of 4 squares. How many sets do you have?



# Corners



Reduce the  
Price of the  
Cap by £3.



# Corners



Calculate  
6 lots of 8.



# Corners



Put 24 children  
into groups of 6.  
How many  
groups are there?



# Corners



Find the total  
Of 7 and 34.



# Corners



You have 27 sweets.  
increase the number  
of sweets by 7.



# Corners



If there are 22 children on the football pitch and three are sent off, how many children are left playing football?



Zero



0

How many words can you think of for this number?

Show me 0 fingers.

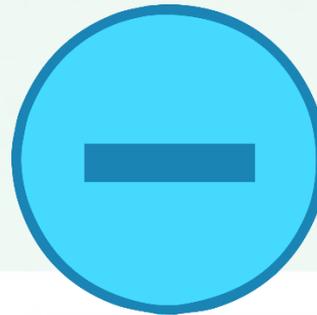
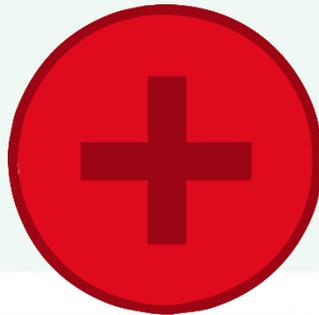
Show me 0 \_\_\_\_\_

# Adding and Subtracting 0



Use the resources on your tables to make  $4 \text{ plus } 0 = 4$ .  
Can you make a word problem to go with it?

Next make  $6 - 0 = 6$ .  
Can you say this number sentences in different ways using the words;  
**take away, subtract, less than** or **minus**?  
Can you make a word problem to go with it?

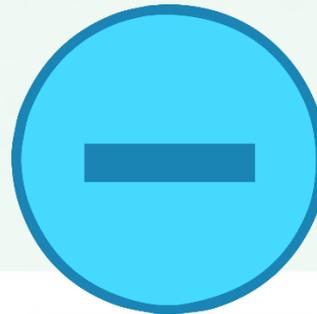
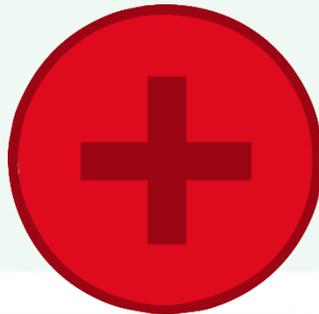


# Make a Rule



Write a rule for adding or subtracting 0.

**If you add or subtract 0 from a number, the answer is always the number that you started with.**



# Multiplying by 0



Is multiplying by 0 different from adding 0?

Use the resources on your tables to make

$$7 \times 0 = 0 \text{ and } 0 \times 7 = 0$$

This is the same as

$$0 + 0 + 0 + 0 + 0 + 0 + 0 = 0$$

When multiplying by 0 you have nothing to begin with.



# Make a Rule

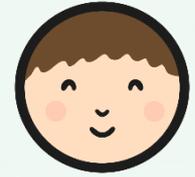


Write a rule for multiplying by 0.

**If you multiply a number by 0 the answer is always 0 because you have nothing to multiply.**



# Calculations with 0 and 1



## ★ Calculations

### Multiplying and Dividing by One

1. Draw a picture to illustrate  $6 \times 1 = 6$



- a.  $3 \div 1 =$  \_\_\_\_\_
- b.  $5 \div 1 =$  \_\_\_\_\_
- c.  $1 \times 8 =$  \_\_\_\_\_
- d.  $0 \times 1 =$  \_\_\_\_\_
- e.  $1 \times 1 =$  \_\_\_\_\_

2. Complete these sentences to explain the rule. You can use the same sentence for both rules.  
When you multiply a number by one the number stays the same.  
When you divide a number by one the number stays the same.

the number that you started with  
zero  
one  
double the number you started with

## ★ Calculations

3. Now solve these problems:

- a.  $5 \times 0 =$  \_\_\_\_\_
- b.  $1 \times 100 =$  \_\_\_\_\_
- c.  $15 \times 0 =$  \_\_\_\_\_
- d.  $15 \div 1 =$  \_\_\_\_\_
- e.  $4 \times 1 =$  \_\_\_\_\_
- f.  $5 \div 1 =$  \_\_\_\_\_
- g.  $0 \times 0 =$  \_\_\_\_\_
- h.  $1 \div 1 =$  \_\_\_\_\_
- i.  $19 \div 1 =$  \_\_\_\_\_

## ★★★ Calculations

### Multiplying and Dividing by One

1. Answer these calculations:

- a.  $8 \div 1 =$  \_\_\_\_\_
- b.  $86 \div 1 =$  \_\_\_\_\_
- c.  $32 \times 0 =$  \_\_\_\_\_
- d.  $1 \times 45 =$  \_\_\_\_\_
- e.  $0 \times 1 =$  \_\_\_\_\_
- f.  $1 \times 1 =$  \_\_\_\_\_

2. Complete these sentences to explain the rule. You can use the same sentence for both rules.

When you multiply a number by one the number stays the same.  
When you divide a number by one the number stays the same.

3. Now solve these problems:

- a. The product of 2 and 0 is \_\_\_\_\_.
- b.  $0 \times 48 =$  \_\_\_\_\_.
- c. 1 set of 2340 is \_\_\_\_\_.
- d. 150 multiplied by 1 is \_\_\_\_\_.
- e.  $150 \div 1 =$  \_\_\_\_\_.
- f.  $42 \times 1 =$  \_\_\_\_\_.

## ★★★ Calculations

### Multiplying and Dividing by One

1. Answer these calculations:

- a.  $8 \div 1 =$  \_\_\_\_\_
- b.  $86 \div 1 =$  \_\_\_\_\_
- c.  $32 \times 0 =$  \_\_\_\_\_
- d.  $1 \times 45 =$  \_\_\_\_\_
- e.  $0 \times 1 =$  \_\_\_\_\_
- f.  $1 \times 1 =$  \_\_\_\_\_

2. Complete these sentences to explain the rule. You can use the same sentence for both rules.

When you multiply a number by one the number stays the same.  
When you divide a number by one the number stays the same.

## ★★★ Calculations

### Calculations with 0 and 1

3. Now solve these problems:

- a.  $23 \times 0 =$  \_\_\_\_\_
- b. 0 plus 48 = \_\_\_\_\_
- c.  $1 \times 2340 =$  \_\_\_\_\_
- d. The product of 150 and 0 = \_\_\_\_\_
- e.  $150 \div 1 =$  \_\_\_\_\_
- f.  $42 \times 1 =$  \_\_\_\_\_
- g.  $510 \div 1 =$  \_\_\_\_\_
- h.  $0 \times 0 =$  \_\_\_\_\_
- i. 1 divided by 1 = \_\_\_\_\_
- j. 199 minus 1 = \_\_\_\_\_
- k.  $53 \times 0 =$  \_\_\_\_\_
- l.  $0 + 7878 =$  \_\_\_\_\_
- m. 1 multiplied by 23 = \_\_\_\_\_
- n.  $67 \times 0 =$  \_\_\_\_\_
- o.  $139 \div 1 =$  \_\_\_\_\_
- p. The sum of 412 and 1 = \_\_\_\_\_
- q. 1000 subtract 1 = \_\_\_\_\_
- r.  $5 \times 0 =$  \_\_\_\_\_
- s.  $111 \div 1 =$  \_\_\_\_\_
- t. 2 shared by 1 = \_\_\_\_\_

# True or False



When you divide a number by 1 the answer is always 0.

**FALSE**

When you multiply a number by 1 the answer is the same as the number you started with.

**TRUE**

When you multiply a number by 0 the answer is always 0.

**TRUE**

# Aim



- I can multiply 0 and 1 and divide by 1.

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