# Year 4 - Multiplication and Division

## Key vocabulary

| | |
|---|---|
| Multiplication | Division |
| Multiply | Divide |
| Factor | Remainder |
| Factor Pair | Exchange |
| Commutative Law | Efficient |
| Commutative | Operation |

## Multiplication - Written Method

| | 1 | 2 | 4 |
|---|---|---|---|
| x | | | 3 |
| | 3 | 7 | 2 |

1

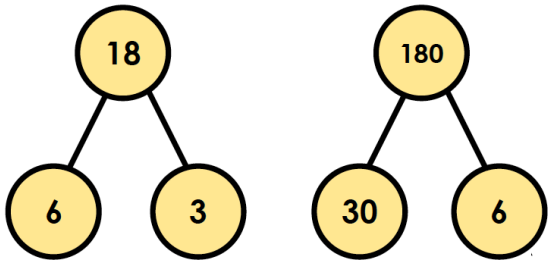
Multiply each digit by the 1 digit number, starting with the ones.

4 x 3 = 12 so you place the 2 ones in the ones column and exchange the ten ones for one ten and place this underneath in the tens column.

Then multiply the tens digit, remembering to add the extra ten, then complete with the hundreds digit.

## Using Related Facts

You can use known facts to solve larger problems. For example...




| | |
|---|---|
| 3 x 6 = 18 | 6 x 3 = 18 |
| 18 ÷ 3 = 6 | 18 ÷ 6 = 3 |
| 30 x 6 = 180 | 60 x 3 = 180 |
| 180 ÷ 30 = 6 | 180 ÷ 60 = 3 |

## Multiplying 3 numbers

**4 x 3 x 6 = 72**

"I would solve this by multiplying 4 by 3, which is 12. Then, I multiply 12 by 6, which is 72."

"Because multiplication is commutative, you can multiply the numbers in any order and you will get the same answer."

| | |
|---|---|
| 4 x 3 x 6 = 72 | 3 x 6 x 4 = 72 |
| 4 x 6 x 3 = 72 | 6 x 4 x 3 = 72 |
| 3 x 4 x 6 = 72 | 6 x 3 x 4 = 72 |

## Division - Written Method

| Start by looking at how many groups of 6 you can make with 1 hundred. You cant make any complete groups so you place a zero and carry the 1 over to the tens. | Next, you an make 2 groups of 6 using 12 tens. Therefore, you place a 2 in the tens column.<br><br>There is no remainder. | Finally, with 6 ones you can make 1 group of 6. Therefore, place a 1 in the ones column.<br><br>The final answer is 21. |
|---|---|---|
| 0 / 6 \| 1 \| 1 2 \| 6 | 0 2 / 6 \| 1 \| 1 2 \| 7 | 0 2 1 / 6 \| 1 \| 1 2 \| 6 |