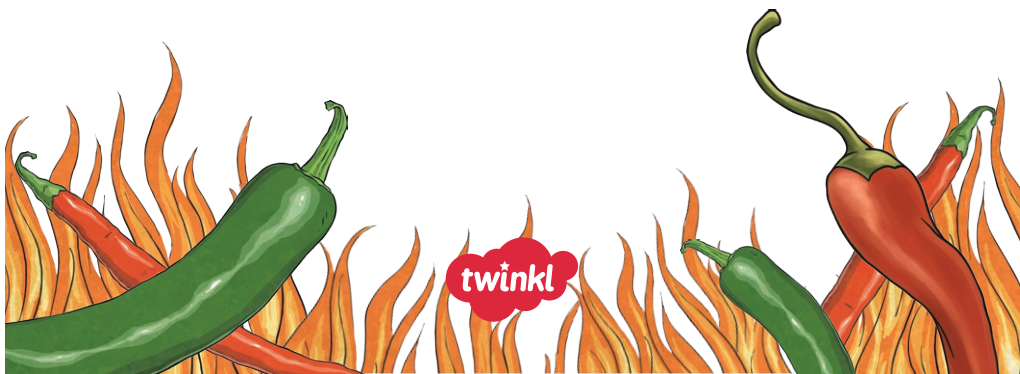


# Chilli Challenge

Addition, Subtraction, Multiplication and Division



Addition, Subtraction,  
Multiplication and Division

Nice and Spicy! 

## Calculating

**Use rounding to check answers to calculations**

Round these numbers to the nearest 100 to check:

$$7683 - 5847 = 2336$$

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Addition, Subtraction,  
Multiplication and Division

Nice and Spicy! 

## Calculating

**Identify multiples and factors, including finding all factor pairs of a numbers less than 20, and common factors of two numbers less than 20**

Factor pairs of 14 are  $1 \times \square$  ,  $2 \times \square$

Common factors of 6 and 12:  $\square$  ,  $\square$  ,  $\square$  and  $\square$

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Addition, Subtraction,  
Multiplication and Division

Nice and Spicy! 

## Calculating

**Know and use the vocabulary of prime numbers**

Prime numbers have only 1 and itself as factors.

**Recall prime numbers up to 19**

Prime numbers: 2,  $\square$  , 5, 7,  $\square$  , 13,  $\square$  , 19.

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## Calculating

**Multiply and divide whole numbers and those involving decimals by 10 and 100**

$$234 \times 10 = \boxed{\phantom{000}} \quad 341 \div 10 = \boxed{\phantom{00}}$$

$$185 \times 100 = \boxed{\phantom{0000}} \quad 1609 \div 100 = \boxed{\phantom{00}}$$

## Solve Problems

**Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why**

One Y5 class has 14 boys and 15 girls. On Tuesday, 25 children are in class. How many children are absent?

## Methods

**Add and subtract numbers up to 3 digits mentally**

$$562 + 240 = \boxed{\phantom{000}} \quad 720 - 457 = \boxed{\phantom{000}}$$

## Methods

**Add and subtract whole numbers with more than 3 digits, including using formal written methods (columnar addition and subtraction)**

$$\begin{array}{r} 681 \\ + 907 \\ \hline \end{array} \quad \begin{array}{r} 827 \\ - 643 \\ \hline \end{array}$$

### Methods

**Multiply numbers up to 3 digits by a one-digit number using a formal written method**

$$\begin{array}{r} 465 \\ \times 8 \\ \hline \end{array}$$

### Methods

**Multiply and divide numbers mentally drawing upon known facts**

$$485 \times 8 =$$

$$500 \times 8 = 4000, 15 \times 8 = \boxed{\phantom{000}}$$

$$485 \times 8 = 4000 - 120 = 3880$$

### Methods

**Divide numbers up to 3 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context**

$$6 \overline{)282}$$

### Calculating

**Use rounding to check answers to calculations**

Round these numbers to the nearest 100 to check:  
 $7683 - 5847 = 2336$

**7700 - 5800 = 1900 so 2336 is incorrect**

### Calculating

**Identify multiples and factors, including finding all factor pairs of a numbers less than 20, and common factors of two numbers less than 20**

Factor pairs of 14 are  $1 \times 14$  ,  $2 \times 7$

Common factors of 6 and 12: **1, 2, 3 and 6**

### Calculating

**Know and use the vocabulary of prime numbers**

Prime numbers have only 1 and itself as factors.

**Recall prime numbers up to 19**

Prime numbers: 2, **3**, 5, 7, **11**, 13, **17**, 19.

### Calculating

**Multiply and divide whole numbers and those involving decimals by 10 and 100**

$$234 \times 10 = 2340 \quad 341 \div 10 = 34.1$$

$$185 \times 100 = 18\,500 \quad 1609 \div 100 = 16.09$$

### Solve Problems

**Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why**

One Y5 class has 14 boys and 15 girls. On Tuesday, 25 children are in class. How many children are absent?

**4**

### Methods

**Add and subtract numbers up to 3 digits mentally**

$$562 + 240 = 802 \quad 720 - 457 = 263$$

### Methods

**Add and subtract whole numbers with more than 3 digits, including using formal written methods (columnar addition and subtraction)**

$$\begin{array}{r} 681 \\ + 907 \\ \hline 1588 \end{array} \quad \begin{array}{r} 78127 \\ - 643 \\ \hline 184 \end{array}$$

### Methods

**Multiply numbers up to 3 digits by a one-digit number using a formal written method**

$$\begin{array}{r} 5465 \\ \times \quad 8 \\ \hline 3720 \end{array}$$

### Methods

**Multiply and divide numbers mentally drawing upon known facts**

$$485 \times 8 =$$

$$500 \times 8 = 4000, 15 \times 8 = 120$$

$$485 \times 8 = 4000 - 120 = 3880$$

### Methods

**Divide numbers up to 3 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context**

$$\begin{array}{r} 47 \\ 6 \overline{) 282} \end{array}$$



## Calculating

**Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy**

Round these numbers to the nearest 100 to check:

$$67\ 683 - 28\ 347 = 41\ 336$$



## Calculating

**Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers**

Factor pairs of 28 are  $1 \times 28$ , ,  $4 \times 7$

Common factors of 15 and 36:



## Calculating

**Know and use the vocabulary of prime numbers, prime factors and composite (nonprime) numbers**

Prime numbers have only 1 and itself as factors.

Prime factors of  $24 = 2 \times 2 \times 2 \times 3$ , so 2 and 3.

Composite numbers are numbers that are not prime.

**Establish whether a number up to 100 is prime and recall prime numbers up to 19**

Is 13 prime?

Prime numbers: 2, , 5, , , 13, , 19.



## Calculating

**Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000**

$$234 \times 1000 = \text{} \quad 341 \div \text{} = 3.41$$



### Solve Problems

**Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why**

Class A has 13 boys and 15 girls, and Class B has 16 boys and 17 girls. How many more children are in class B than class A?



### Methods

**Add and subtract numbers mentally with increasingly large numbers**

$$3562 + 240 = \boxed{\phantom{0000}} \quad 4720 - 457 = \boxed{\phantom{0000}}$$



### Methods

**Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)**

$$\begin{array}{r} 4681 \\ + 2907 \\ \hline \end{array} \quad \begin{array}{r} 3127 \\ - 643 \\ \hline \end{array}$$



### Methods

**Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers**

$$\begin{array}{r} 3614 \\ \times \phantom{00} 7 \\ \hline \end{array} \quad \begin{array}{r} 465 \\ \times \phantom{00} 28 \\ \hline \\ \hline \end{array}$$



### Methods

**Multiply and divide numbers mentally drawing upon known facts**

$$2485 \times 8 =$$

$$2500 \times 8 = 20\,000, 15 \times 8 = \boxed{\phantom{000}}$$

$$2485 \times 8 = 20\,000 - 120 = \boxed{\phantom{000}}$$

### Methods

**Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context**

$$6 \overline{)5382}$$

**17 children need to travel by car to a school event. Four children can travel in each car. How many cars are needed?**



## Calculating

**Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy**

Round these numbers to the nearest 100 to check:

$$67\,683 - 28\,347 = 41\,336$$

**$67\,700 - 28\,300 = 39\,400$  so  $41\,336$  is incorrect.**



## Calculating

**Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers**

Factor pairs of 28 are  $1 \times 28$ ,  $2 \times 14$ ,  $4 \times 7$

Common factors of 15 and 36: **1 and 3**



## Calculating

**Know and use the vocabulary of prime numbers, prime factors and composite (nonprime) numbers**

Prime numbers have only 1 and itself as factors.

Prime factors of  $24 = 2 \times 2 \times 2 \times 3$ , so 2 and 3.

Composite numbers are numbers that are not prime.

**Establish whether a number up to 100 is prime and recall prime numbers up to 19**

Is 13 prime?

Prime numbers: 2, **3**, 5, **7**, **11**, 13, **17**, 19.



## Calculating

**Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000**

$$234 \times 1000 = 234\,000 \quad 341 \div 100 = 3.41$$

### Solve Problems

**Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why**

Class A has 13 boys and 15 girls, and Class B has 16 boys and 17 girls. How many more children are in class B than class A?

**5**

### Methods

**Add and subtract numbers mentally with increasingly large numbers**

$$3562 + 240 = 3802 \quad 4720 - 457 = 4263$$

### Methods

**Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)**

$$\begin{array}{r} 4681 \\ + 2907 \\ \hline 7588 \\ 1 \end{array} \quad \begin{array}{r} 23127 \\ - 643 \\ \hline 2484 \\ 2 \end{array}$$

### Methods

**Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers**

$$\begin{array}{r} 3614 \\ \times 7 \\ \hline 25298 \\ 41 \end{array} \quad \begin{array}{r} 465 \\ \times 28 \\ \hline 3720 \\ 9300 \\ \hline 13020 \\ 1 \end{array}$$

### Methods

**Multiply and divide numbers mentally drawing upon known facts**

$$2485 \times 8 =$$

$$2500 \times 8 = 20\,000, 15 \times 8 = 120$$

$$2485 \times 8 = 20\,000 - 120 = 19\,880$$

### Methods

**Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context**

$$\begin{array}{r} 897 \\ 6 \overline{) 5382} \end{array}$$

**17 children need to travel by car to a school event. Four children can travel in each car. How many cars are needed?**

$$17 \div 4 = 4 \text{ r}1, \text{ so } 5 \text{ cars are needed}$$

## Calculating

**Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy**

Round these numbers to check:

$$67\ 683 - 28\ 347 = 41\ 336$$

## Calculating

**Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers**

The factor pairs of 56 are:

Common factors of 24 and 76:

## Calculating

**Know and use the vocabulary of prime numbers, prime factors and composite (nonprime) numbers**

A prime number is a number...

The prime factors of 24 are:

Composite numbers are...

## Calculating

**Establish whether a number up to 100 is prime and recall prime numbers up to 19**

Explain why 13 is a prime number and 14 is not:

Prime numbers to 19 are:

## Calculating

**Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000**

Explain the effect of multiplying or dividing by 10, 100 or 1000.

## Solve Problems

**Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why**

Write an addition and subtraction word problem that uses more than two steps.

## Methods

**Add and subtract numbers mentally with increasingly large numbers**

$$3562 + 380 =$$

$$5060 - 438 =$$

## Methods

**Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)**

Explain how to use a formal columnar method to solve these equations:

$$6196 + 3677 =$$

$$7082 - 3439 =$$

### Methods

**Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers.**

Explain how the formal long multiplication method provides the answer.

### Methods

**Multiply and divide numbers mentally drawing upon known facts**

Explain two different mental methods for calculating:

$$2485 \times 8 =$$

### Methods

**Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context**

Explain how the formal written method of division provides the answer. Write two different word problems to explain the two different ways that the remainder can be used.

1. The remainder is not used because it is not a complete set or group.
2. The remainder needs to be used, although the final group or set is incomplete.

### Calculating

**Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy**

Round these numbers to check:

$$67\ 683 - 28\ 347 = 41\ 336$$

$$68\ 000 - 28\ 000 = 40\ 000$$

### Calculating

**Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers**

The factor pairs of 56 are: 1 and 56, 2 and 28, 4 and 14, 7 and 8

Common factors of 24 and 76: 1, 2, 4

### Calculating

**Know and use the vocabulary of prime numbers, prime factors and composite (nonprime) numbers**

A prime number is a number **which has only itself and 1 as factors.**

The prime factors of 24 are:  $2 \times 2 \times 2 \times 3$  so 2 and 3

Composite numbers are **numbers that are not prime.**

### Calculating

**Establish whether a number up to 100 is prime and recall prime numbers up to 19**

Explain why 13 is a prime number and 14 is not: 3 is a prime number because it only has two factors, 1 and 13. 14 is not a prime number because it has more than two factors, 1, 2, 7 and 14.

Prime numbers to 19 are: 2, 3, 5, 7, 11, 13 and 17



## Calculating

### Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000

Explain the effect of multiplying or dividing by 10, 100 or 1000.

Numbers move 1, 2 or 3 places left (multiplying) or right (dividing) and become 10, 100 or 1000 x larger/smaller.

## Solve Problems

### Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why

Write an addition and subtraction word problem that uses more than two steps.

For example: Class A has 13 boys and 15 girls and class B has 16 boys and 17 girls. How many more children are in class B than class A?

## Methods

### Add and subtract numbers mentally with increasingly large numbers

$$3562 + 380 = 3942$$

$$5060 - 438 = 4622$$

## Methods

### Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)

Explain how to use a formal columnar method to solve these equations:

$$6196 + 3677 =$$

$$7082 - 3439 =$$

Children explain to one another/teacher according to method taught in class.

### Methods

**Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers.**

Explain how the formal long multiplication method provides the answer.

Children explain to one another/teacher according to method taught in class.

### Methods

**Multiply and divide numbers mentally drawing upon known facts**

Explain two different mental methods for calculating:

$$2500 \times 8 = 20\,000, 15 \times 8 = 120$$

$$2485 \times 8 = 20\,000 - 120 = 19\,880$$

$$2000 \times 8 = 16\,000, 400 \times 8 = 3200, 80 \times 8 = 640, 5 \times 8 = 40$$

$$2485 \times 8 = 16\,000 + 3200 + 640 + 40 = 19\,880$$

### Methods

**Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context**

Explain how the formal written method of division provides the answer. Write two different word problems to explain the two different ways that the remainder can be used.

1. The remainder is not used because it is not a complete set or group.
2. The remainder needs to be used, although the final group or set is incomplete.

Children explain to one another/teacher according to method taught in class.