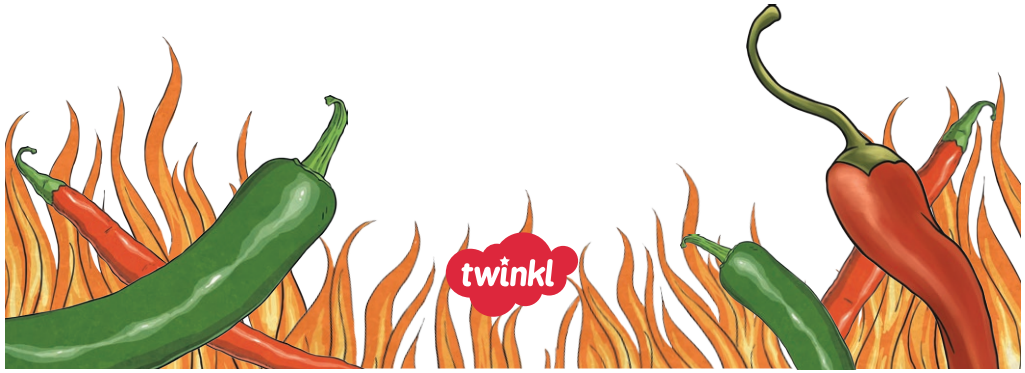
Chilli Challenge

Addition, Subtraction, Multiplication and Division



Calculating

Estimate and use inverse operations to check answers to a simple calculation

Is this answer correct? Use the inverse operation to check the answer.

173 – 26 = 137

Calculating

Recognise and use factor pairs to 20 and commutativity in mental calculations by reversing the multipliers

What are the factor pairs of 12?

Complete this number sentence 5 × 9 = _____ × _____ = 45

Number Facts

Recall and use multiplication and division facts for the two, three, four, five and ten multiplication tables

8 × 5 =	40 ÷ 4 =
9 × 4 =	27 ÷ 9 =
3 × 6 =	48 ÷ 8 =
10 × 8 =	60 ÷ 10 =
4 × 7 =	35 ÷ 7 =

Solve Problems

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

Two children collect all the pencils in a classroom, collecting 76 and 105 each. How many pencils are there altogether?

Solve Problems

Solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems

Multiply 26 × 4

Four bags of potatoes weigh 600g. How much will two bags weigh?

Methods

Add and subtract numbers with up to 3 digits using the formal written methods of columnar addition and subtraction where appropriate

Complete these column addition sums.

$$\begin{array}{r} 629 \\ +\ 57 \\ \hline \end{array} \qquad \begin{array}{r} 1\,^{6}\!\not{7}\,^{1}3 \\ -\ 64 \\ \hline \end{array}$$

Methods

Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers

56 × 1 = 56 × 0 =

56 ÷ 1 = 7 × 3 × 5 =

Calculate 133 ÷ 7 by counting back in 7s using a number line.

Methods

Multiply two-digit numbers by a one-digit number using formal written layout

$$\begin{array}{r} 5\ 7 \\ \times\quad 6 \\ \hline \end{array}$$

Calculating

Estimate and use inverse operations to check answers to a simple calculation

Is this answer correct? Use the inverse operation to check the answer.

173 – 26 = 137

137 + 26 = 163, so incorrect

Addition, Subtraction, Multiplication and Division **Answers**

Nice and Spicy!

Calculating

Recognise and use factor pairs to 20 and commutativity in mental calculations by reversing the multipliers

The factor pairs of 12 are: 1 and 12, 2 and 6, 3 and 4.

Complete this number sentence 5 × 9 = **9 × 5** = 45

Addition, Subtraction, Multiplication and Division **Answers**

Nice and Spicy!

Number Facts

Recall and use multiplication and division facts for the two, three, four, five and ten multiplication tables

8 × 5 = **40**

9 × 4 = **36**

3 × 6 = **18**

10 × 8 = **80**

4 × 7 = **28**

40 ÷ 4 = **10**

27 ÷ 9 = **3**

48 ÷ 8 = **6**

60 ÷ 10 = **6**

35 ÷ 7 = **5**

Addition, Subtraction, Multiplication and Division **Answers**

Nice and Spicy!

Solve Problems

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

Two children collect all the pencils in a classroom, collecting 76 and 105 each. How many pencils are there altogether?

76 + 105 = 181

Solve Problems

Solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems

Multiply 26 × 4

20 × 4 = 80 6 × 4 = 24 So 26 × 4 = 104

Four bags of potatoes weigh 600g. How much will two bags weigh?

300g

Methods

Add and subtract numbers with up to 3 digits using the formal written methods of columnar addition and subtraction where appropriate

Complete these column addition sums.

```
   6 2 9
 +   5 7
 -------
   6₁8 6
```

```
   1 ⁶7̸ ¹3
 -   6 4
 -------
   1 0 9
```

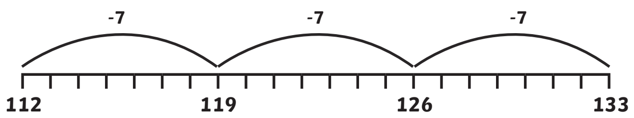

Methods

Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers

56 × 1 = **56** 56 × 0 = **0**

56 ÷ 1 = **56** 7 × 3 × 5 = **105**

Calculate 133 ÷ 7 by counting back in 7s using a number line.



Methods

Multiply two-digit numbers by a one-digit number using formal written layout

```
   5 7
 ×   6
 -----
 3₄4 2
```

Calculating

Estimate and use inverse operations to check answers to a calculation

What calculation might be used to estimate 5762 + 1903?

Check 4173 – 826 = 3247

Addition, Subtraction, Multiplication and Division

It's getting hot!

Calculating

Recognise and use factor pairs and commutativity in mental calculations

What are the factor pairs of 24?

Write 2 × 6 × 5 as a different multiplication, using just 2 numbers

Addition, Subtraction, Multiplication and Division

It's getting hot!

Number Facts

Recall multiplication and division facts for multiplication tables up to 12 × 12

8 × 7 =	44 ÷ 4 =
9 × 4 =	27 ÷ 9 -
7 × 6 =	72 ÷ 8 =
11 × 8 =	24 ÷ 12 =
4 × 12 =	56 ÷ 7 =

Addition, Subtraction, Multiplication and Division

It's getting hot!

Solve Problems

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

Two children collect all the pencils in a classroom, collecting 76 and 105 each. The teacher throws away 43 of them, as they are broken. How many pencils are left?

Solve Problems

Solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects

There are four boxes of books. Each box contains 22 books. Four more books are added to each box. Explain two ways of calculating the total number of books.

Eight bags of potatoes weigh 2kg. How much will three bags weigh?

Methods

Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate

$$\begin{array}{r} 6\,0\,2\,9 \\ +\ \ 4\,5\,7 \\ \hline \end{array} \qquad \begin{array}{r} {}^{4}\not{5}\,{}^{1}1\,{}^{6}\not{7}\,{}^{1}3 \\ -\ \ 3\,6\,4 \\ \hline \end{array}$$

Methods

Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers

$56 \times 1 =$ $\qquad$ $56 \times 0 =$

$56 \div 1 =$ $\qquad$ $7 \times 3 \times 5 =$

Calculate $133 \div 7$

Methods

Multiply two-digit and three-digit numbers by a one-digit number using formal written layout

$$\begin{array}{r} 4\,5\,7 \\ \times \qquad 6 \\ \hline \end{array}$$

Calculating

Estimate and use inverse operations to check answers to a calculation

What calculation might be used to estimate 5762 + 1903?

6000 + 2000 or 5800 + 1900

Check 4173 – 826 = 3247

3247 + 826 = 4073, so incorrect

Addition, Subtraction, Multiplication and Division **Answers**

It's getting hot!

Calculating

Recognise and use factor pairs and commutativity in mental calculations

The factor pairs of 24 are: 1 and 24, 2 and 12, 3 and 8, 4 and 6.

2 × 6 × 5 can be written 6 × 10 = 60, 12 × 5 = 60 or 2 × 30 = 60

Addition, Subtraction, Multiplication and Division **Answers**

It's getting hot!

Number Facts

Recall multiplication and division facts for multiplication tables up to 12 × 12

8 × 7 = **56**	44 ÷ 4 = **11**
9 × 4 = **36**	27 ÷ 9 - **3**
7 × 6 = **42**	72 ÷ 8 = **9**
11 × 8 = **88**	24 ÷ 12 = **2**
4 × 12 = **48**	56 ÷ 7 = **8**

Addition, Subtraction, Multiplication and Division **Answers**

It's getting hot!

Solve Problems

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

Two children collect all the pencils in a classroom, collecting 76 and 105 each. The teacher throws away 43 of them, as they are broken. How many pencils are left?

76 + 105 = 181, 181 - 43 = 138

Solve Problems

Solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects

There are four boxes of books. Each box contains 22 books. Four more books are added to each box. Explain two ways of calculating the total number of books.

22 × 4 books and 4 × 4 books added = 88 + 16 = 104
22 + 4 books in each box, 26 × 4 = 104

Eight bags of potatoes weigh 2kg. How much will three bags weigh?

8 bags weigh 2kg So, 4 bags weigh 1kg 2 bags weigh 500g 1 bag weighs 250g
3 bags of potatoes would weigh 500g + 250g = 750g

Methods

Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate

$$\begin{array}{r} 6\,0\,2\,9 \\ +\quad 4\,5\,7 \\ \hline 6\,4_{1}\,8\,6 \end{array} \qquad \begin{array}{r} {}^{4}\not{5}\,{}^{1}1\,{}^{6}\not{7}\,{}^{1}3 \\ -\quad 3\,6\,4 \\ \hline 4\,8\,0\,9 \end{array}$$

Methods

Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers

56 × 1 = **56** 56 × 0 = **0**

56 ÷ 1 = **56** 7 × 3 × 5 = **105**

Calculate 133 ÷ 7

10 × 7 = 70, 20 × 7 = 140

So 133 ÷ 7 = 19

Methods

Multiply two-digit and three-digit numbers by a one-digit number using formal written layout

$$\begin{array}{r} 4\,5\,7 \\ \times \qquad 6 \\ \hline 2_{3}\,7_{4}\,4\,2 \end{array}$$

Calculating

Estimate and use inverse operations to check answers to a calculation

Explain how 7209 – 3862 can be estimated.

Explain with an example why you can use an inverse calculation to check a subtraction.

Calculating

Recognise and use factor pairs and commutativity in mental calculations

What are the factor pairs of 48?

Write another multiplication that equals 4 × 6 × 5

Calculating

Recall and use multiplication and division facts for multiplication tables up to 12 × 12

80 × 7 =	440 ÷ 4 =
9 × 40 =	270 ÷ 90 =
70 × 60 =	7200 ÷ 8 =
11 × 800 =	2400 ÷ 120 =
400 × 12 =	5600 ÷ 700 =

Solve Problems

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

Write a two-step addition and subtraction problem for this calculation:

789 - 345 = 444, 444 + 267 = 711

Solve Problems

Solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects

Explain how the distributive law can help to calculate 173 × 8.

An athlete runs 1500m one day. The following day, the athlete runs 6000m. What questions could be asked about the relationship between the two runs?

A school buys 12 bags of balls, which contain 60 balls in all. Class A receives 13 balls. How many bags does class A receive?

Methods

Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate

$$\begin{array}{r} 6029 \\ +\ 2457 \\ \hline \end{array} \qquad \begin{array}{r} 5173 \\ -\ 1364 \\ \hline \end{array}$$

Methods

Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers

Explain the reasoning behind the answers:

$56 \times 1 =$ $\qquad$ $56 \times 0 =$

$56 \div 1 =$ $\qquad$ $7 \times 9 \times 5 = 315$

Explain how you might calculate 203 ÷ 7 mentally.

Methods

Multiply two-digit and three-digit numbers by a one-digit number using formal written layout

$$\begin{array}{r} 457 \\ \times\ \ 8 \\ \hline \end{array}$$

Calculating

Estimate and use inverse operations to check answers to a calculation

Explain how 7209 – 3862 can be estimated.

Answers could include 7000 - 4000, 7200 - 3800.

Explain with an example why you can use an inverse calculation to check a subtraction.

Examples could include

1276-672 = 604 (604 + 672 = 1276)

Calculating

Recognise and use factor pairs and commutativity in mental calculations

The factor pairs of 48 are: 1 and 48, 2 and 24, 3 and 16, 4 and 12, 6 and 8.

4 × 6 × 5 can be written:

6 × 20 = 120, 4 × 30 = 120 or 24 × 5 = 120

Calculating

Recall and use multiplication and division facts for multiplication tables up to 12 × 12

80 × 7 = **560**	440 ÷ 4 = **110**
9 × 40 = **360**	270 ÷ 90 = **3**
70 × 60 = **4200**	7200 ÷ 8 = **900**
11 × 800 = **8800**	2400 ÷ 120 = **20**
400 × 12 = **4800**	5600 ÷ 700 = **8**

Solve Problems

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

Write a two-step addition and subtraction problem for this calculation:

789 - 345 = 444, 444 + 267 = 711

An example could be:

On Saturday, Sarah made 789 cupcakes and sold 345 of them. The next day she baked 267 more cakes. How many does she have to sell now?

Solve Problems

Solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects

Explain how the distributive law can help to calculate 173 × 8.
Answer should refer to multiplying numbers individually
(100x8) + (70x8) + (3x8) = 800 + 560 + 24 = 1384
An athlete runs 1500m one day. The following day, the athlete runs 6000m. What questions could be asked about the relationship between the two runs?
Answer will vary but could include: 'How many times further did the athlete run on day two?'
A school buys 12 bags of balls, which contain 60 balls in all. Class A receives 13 balls. How many bags does class A receive?
Answer should refer to combining multiplication and division: 12 bags = 60 balls
60 ÷ 12 = 5 (So, 5 balls per bag)
Class A receive 13 balls 13 ÷ 5 = 2.6 Class A received 2.6 bags

Methods

Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate

$$\begin{array}{r} 6029 \\ +\ 2457 \\ \hline 8486 \\ {\scriptstyle 1\ \ \ \ } \end{array} \qquad \begin{array}{r} {\scriptstyle 4\ 1\ 6\ 1\ \ \ } \\ 5173 \\ -\ 1364 \\ \hline 3809 \end{array}$$

Methods

Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers

Explain the reasoning behind the answers:

56 × 1 = 56 × 0 = 56 ÷ 1 = 7 × 9 × 5 = 315

Explain how you might calculate 203 ÷ 7 mentally.

Answers could include: If a number is multiplied by 1, the answer is always that same number. If a number is multiplied by 0, the answer is always 0. If a number is divided by 1, the answer is always that number.

For example: 7x9x5= 315 because 7x5 = 35, 10x35 = 350 Then, take away 35 (because it should be x9) 350 – 35 = 315

Methods

Multiply two-digit and three-digit numbers by a one-digit number using formal written layout

$$\begin{array}{r} 457 \\ \times\ \ \ 8 \\ \hline 3656 \\ {\scriptstyle 4\ 5\ \ \ } \end{array}$$