

Number and place value; addition and subtraction; multiplication and division; fractions; measurements

Year 2 Pitch and Expectations

Count in steps of 2, 3 and 5 from 0, and in tens from any number, forward and backward

count in steps of 2

count in steps of 5

39

38 43 53

Pupils count in multiples of 3 and may begin to link this to their understanding of a third.

What is wrong with this sequence?
45, 40, 35, 25

I count in threes, starting at 3. I will say 13. True or false?

Recognise the place value of each digit in a two-digit number (tens, ones)

Look at this list of numbers.

37 12 45 60 72 27

Which is the largest?
Which numbers are between 10 and 20?
What value is the digit 7 in this number?

Look at these signs

< = >

Write the correct signs in each box

85 58

36 36

47 74

Recall and use multiplication and division facts for the 2, 5 and 10 times tables, including recognising odd and even numbers.

What 4 number sentences link these 3 numbers...?
5, 45, 9

Is 34 an odd number? How do you know?

What equations can you make about this array? What do you notice?

Identify, represent and estimate numbers using different representations, including the number line

10p, 2p, 5p coins

30 40

Represent the number 33 in two different ways. Where would the number be on a number line? Which are the tens? Which are the ones?

Show ten more.
Show ten less. Show 11 more and 11 less.

Pupils will be fluent in the place value of two-digit numbers and be able to partition them in different ways (supporting mental addition and subtraction)

23 = 20 + 3

23 = 10 + 13

79 = 70 + 9

23 = + 3

Use place value and number facts to solve problems

Partition 79 in three different ways.

87 >

Make this statement true and explain your decision.

Compare and order numbers from 0 up to 100; use < > and = signs

Solve problems involving multiplication and divisions, using materials, arrays, repeated addition, mental methods and \times \div facts, including in contexts.

There are 10 lollies in a bag. Charlie needs 30 lollies for his party. How many bags does he need to buy? Show how you worked this out.

$10 + 10 + 10 = 30$

Calculate mathematical statements for multiplication and division, using the \times \div = signs.

2p x 9 =

2p x 9 =
Or
9p x 2 =

Anna has 3 boxes of cakes. Each box contains 5 cakes. How many cakes does she have altogether? Show how you worked this out.

Cyd has nine 2p coins. Show how much money he has using arrays.

Read and write numbers to at least 100 in numerals and in words

What numbers can you make using 2 of these digits? 3, 6, 1

Read your numbers to a partner.

Write the largest of the number in words.

Match mathematical statements to different representations of numbers and sets of objects.

Look at the squares of chocolate.

There are 16 squares. Tick (✓) the sum that matches the picture.

$5 + 2 + 9 = 16$
 $5 + 6 + 5 = 16$
 $6 + 6 + 4 = 16$
 $6 + 2 + 8 = 16$
 $8 + 3 + 5 = 16$

Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems.

Sophie had 36 sweets and she gave 17 to her friend. How many did she have left?

$36 - 17 = ?$

$17 + ? = 36$

Show that multiplication can be done in any order (commutative) and division of one number by another is not.

If $8 \times 2 = 16$, then.....
 $2 \times __ = 16$ and
 $__ \div 8 = 2$

Recall and use addition and subtraction facts to 20 fluently and derive and use related facts to 100.

"I know that $6 + 4 = 10$, so I know that $60 + 40 = 100$...I can use place value counters, bundles of straws and coins to show this."

$17 + 3 = 20$
 $20 = 3 + 17$
 $20 - 3 = 17$
 $3 = 20 - 17$

$60 + 40 = 100$
 $100 = 60 + 40$
 $100 - 40 = 60$
 $40 = 100 - 60$

Solve problems with addition and subtraction:

- Using concrete objects and pictorial representations, including those involving numbers, quantities and measures
- Applying their increasing knowledge of mental and written methods

Mina and Ben play a game. Mina scores 70 points. Ben scores 42 points. What is the difference between their scores??

Partition to subtract: $70 - 42$

$70 - 40 + 2 = 30 - 2 = 28$

Extend their understanding of language of addition and subtraction to include sum and difference.

I can subtract using near-multiples of 10:
 $54 - 29 =$
 $54 - 30 + 1 = 25$

I can add using near-multiples of 10:
 $36 + 49 =$
 $36 + 50 - 1 = 85$

I can add by making 10:
 $47 + 8 =$

Add and subtract:
Two-digit and ones
Two-digit and tens
Two two-digits
Three one digits

I can add using doubles:
 $45 + 46 =$
Double $45 + 1 = 91$

I know that $5 + 2 + 1 = 1 + 5 + 2$ and I can show it by re-ordering the sets of counters. So: $50 + 20 + 10 = 10 + 50 + 20$

Pupils begin to understand the commutativity and associativity of addition.

10p, 2p, 5p coins

100, 20, 10, 5, 2, 1 place value counters

0 1 2 3 4 5 6 7 8 9 10

0 10 20 30 40 50 60 70 80 90 100

Recording addition and subtraction in columns to support place value prepares for formal written methods with larger numbers.

30 + 4

20 + 5

50 + 9

Check calculations by adding to check subtractions, and adding numbers in a different order to check addition.

What is wrong?
 $45 + 7 = 52$
 $7 + 45 = 52$
 $7 - 52 = 45$
 $52 - 7 = 45$
How do you know?

Look at the numbers in this addition.
 $9 + 5 = 14$

Use the same numbers to make these correct.
 $__ - __ = 9$
 $__ + 9 = __$

Show that addition of two numbers can be done in any order (commutative) and subtraction of one from the other cannot

Recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity

Harrison and Sam were talking and Harrison said that if he doubled Sam's age and added 2 he would get 12.

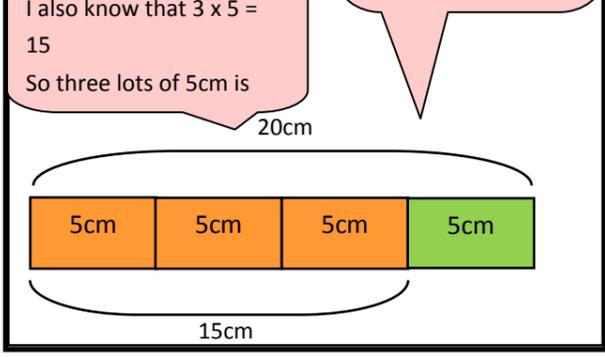


Can you show this problem using a bar model? How old is Sam? How does the model show you this?

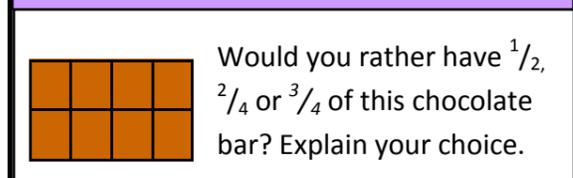
Continue the pattern
 $\frac{1}{4}$ of 4 = 1
 $\frac{1}{4}$ of 8 = 2
 $\frac{1}{4}$ of 12 = 3
 What do you notice?

Pupils meet $\frac{3}{4}$ as the first example if a non-unit fraction and begin to model this when solving problems.

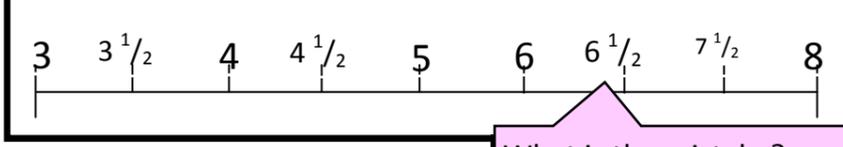
Omar cuts $\frac{3}{4}$ off of a 20cm length of string. How much has he cut off?



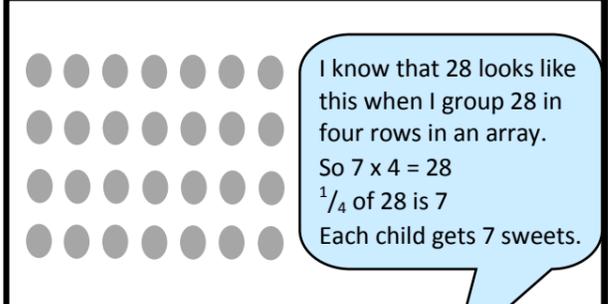
Write simple fractions e.g. $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$



Pupils should count in fractions up to 10, starting from any number and using the $\frac{1}{2}$ and $\frac{2}{4}$ equivalence on the number line



What is the mistake? How would you change the number line to make it correct?

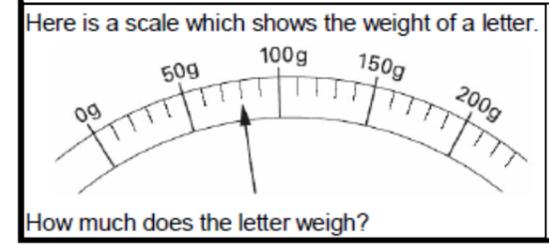


Pupils connect unit fractions to equal sharing and grouping....finding fractions of lengths, quantity, a set of objects or shapes.

Four children each get $\frac{1}{4}$ of 28 sweets. How many do they each get?

Choose and use appropriate standard units to estimate and measure length/height, mass, temperature, capacity to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels.

Draw one line which is twice as long as this line. Use a ruler.



What do you think the temperature is in the classroom? Use a thermometer to check.

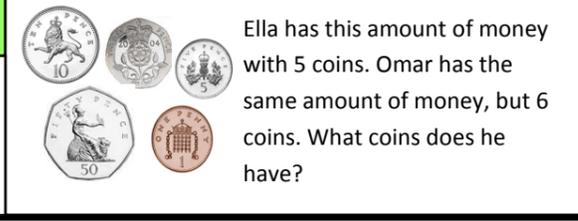
Find an object in the classroom you would estimate to be 10cm long. Check by measuring it using a ruler.

How much water do you think is in your water bottle? Check using a measuring jug.

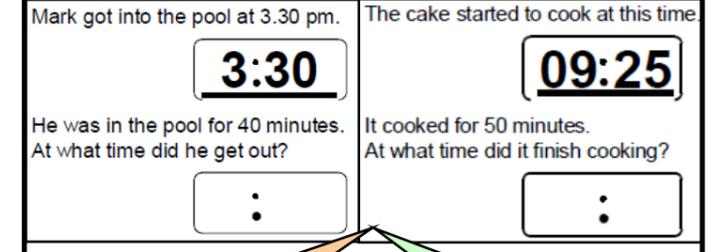
Find different combinations of coins that equal the same amount of money

How many different ways can you make 63p using only 20p, 10p and 1p coins?

Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value



Compare and sequence intervals of time



Which event took longer? How do you know?

If the cake was baked in the evening, which event happened first?

Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change

Jess has saved 62p. She spends 15p. How much money does she have left? She pays with a 50p piece. How much change does she get?

Know the number of minutes in an hour and the number of hours in a day.

The answer is '3 hours'. What could the question be?

Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times.

Draw hands on the clock faces to show when break started and when it finished 15 minutes later at 10:35.



What time does the clock show?
 What is the time five minutes later?
 What was the time 20 minutes ago?
 How much longer until 2:00?