

Number and place value

## Hopscotch counting

To work out the missing numbers, ask: What steps are you counting in?
Tip: If you are counting in 10s, the is digit stays the same: 12, 22, 32, 42...

Fill in the missing numbers on these hopscotch frames.


## Number and place value

## Counting on and back

The first number below gives you the rule to follow for each pattern.
You will need to count on or count back from the starting number.

Write the missing numbers. The first one is done for you.
Step
+2

Number and place value
Combining 10s and 1s
2-digit numbers are made up by combining 10 s and 1 s : $28=20+8$.

Put the 10 s and 1 s cards together to make 16 new numbers. Record each sum. One has been done for you:

| 4 | 0 | 1 | 0 |
| :---: | :---: | :---: | :---: |
| 7 | 0 | 3 | 0 |

$5>2$

7
0
3
01

$$
40+1=41
$$

$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$

## Place value grid

With the number 163, work out:
How many 100s are in that number? How many 10s? How many 1s?

| 100s | 10s | 1s |
| :---: | :---: | :---: |
| 1 | 6 | 3 |



This will help you with additions and subtractions.
Partition these numbers into $100 \mathrm{~s}, 10 \mathrm{~s}$ and 1 s . Write them in the correct column in the table.

|  | 100 s | 10 s | 1s |
| :--- | :--- | :--- | :--- |
| seventy-eight |  |  |  |
| forty-seven |  |  |  |
| one hundred and <br> twenty-three |  |  |  |
| one hundred and four |  |  |  |
| 罟 |  |  |  |

## Number and place value

## Ordering and drawing numbers

Before drawing a 2-digit number on an abacus, decide which number is the 10 s and which is the 1 s :

$$
\text { two } 10 \mathrm{~s} \rightarrow 27 \leftarrow \text { seven 1s }
$$



Tip: To order numbers, start with the lowest 10s number, and then look for the next lowest 10s number.

Order these numbers from lowest to highest. Write them in the small boxes below.

```
89
```

Draw an abacus picture to match each number.

$\square$


## Number and place value

## Comparing and ordering numbers

Look at the 10 s number to help you order numbers.
For 54 and 37, 37 has fewer 10s than 54, so is the lower number.
If the 10 s numbers are the same, look at the 1 s .
For 35 and 37,35 has five 1 s , so is lower than 37.

1. Help Charlie arrange these chairs in the correct order lowest number first.

lowest

highest
$\square$
2. Put these weights in order, starting with the smallest.
$31 \mathrm{~kg} \quad 22 \mathrm{~kg} \quad 50 \mathrm{~kg} \quad 43 \mathrm{~kg} \quad 14 \mathrm{~kg} \quad 45 \mathrm{~kg}$

|  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |

3. Put these lengths in order, starting with the longest.
$33 \mathrm{~cm} \quad 16 \mathrm{~cm} \quad 41 \mathrm{~cm} \quad 17 \mathrm{~cm} \quad 49 \mathrm{~cm} \quad 20 \mathrm{~cm}$


Number and place value

## Using <, > and =

< means less than
$15<20$.
$>$ means greater than $20>15$.
Tip: The open part of the sign always faces the bigger number.
$=$ means the same as or equals: $5=5$.
Fill in the missing sign: $<,>$ or $=$.


Number and place value

Are these true or false? Tick the correct box.
True False

1. $22>24$

2. $42<43$

3. $63>77$
4. $92<89$
$\square$


Write the correct sign: <or>.
1.

2.

3.


## Number and place value

## Estimating numbers on a number line

To estimate, think where halfway would be. Where would 1 be? Where would 10 be?


Halfway is 10. The bear is just before 10. So it is on 9 .
Look at each number line. Work out which number each animal is standing on.



The bear is on number $\square$.
The camel is on number


The dog is on number $\square$ The cat is on number

0



The bear is on number $\square$ The camel is on number


The dog is on number $\square$ The cat is on number $\square$

## Great estimate！

To estimate，ask：Is the number between 0 and 10 ？ 10 and 20 ？ 30 and 40 ？ 50 and 100？

Write your estimate and then count in groups to help you．


为 To 8 S 2戠 O飛
$\qquad$ Estimate $\square$ Count $\square$





Estimate $\square$
Estimate $\square$ Count $\square$ Count $\square$

Number and place value
Writing numbers to 100
Practise writing numbers in numerals and in words. For 34, put thirty and four together to make thirty-four. Try making two-digit numbers.

How many new 2-digit numbers can you find, using the five cards below? Write each number, and its name, in the space below. One has been done for you.

2
3
4
7
8

Helpful words twenty two thirty three forty four seventy seven eighty eight

| 47, forty-seven |  |
| :--- | :--- |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

## Number and place value

## Place-value problems

For some problems you may have to round your answer up or down.
Sometimes, drawing the items in the problem will help you to solve it. In this problem you could draw boxes and put 10 pencils in each one.

1. Pencils are packed in boxes of 10 . How many boxes will I need for:

a. 72 pencils?
 pencils left over
b. 38 pencils?
 pencils left over
c. 56 pencils?

pencils left over
d. 103 pencils?

pencils left over
2. I have some boxes of pencils and a few left over. How many pencils are there altogether if:
a. I have 2 boxes and 7 left over? $\square$ pencils
b. I have 4 boxes and 3 left over? $\square$ pencils
c. I have 9 boxes and 1 left over? $\square$ pencils

## Addition and subtraction

## Numbers to 20

Practise adding numbers to 10 , as these will help you work out addition to 20 .
If you know $1+9=10$, it will help you remember that $11+9=20$.
The is are the same. Use cubes to help you work out the bonds to 20 .


You have two darts to throw at the target.
You must score 20.


Write the different ways to make 20 using pairs of these numbers.

## Addition and subtraction

## Make 20!

Joe has 20 marbles. He puts some in each of his two pockets.
How many different ways can he do this? Use the table below to record your work.


| Pocket 1 | Pocket 2 |
| :--- | :--- |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

## Addition and subtraction

## Numbers to 100

Practise adding numbers to 10 .
This will help you add to 100. Use blocks or cubes to help you
You know that $2+8=10$, so:
$20+80=100$.


You have two darts to throw at the target.
You must score 100.


Write the different ways to make 100 using pairs of these numbers.

## Nrwwnownown

## Perfect Peter has found

 seven ways to make 100 using any two numbers. He has challenged you to find more.- Here is one to start you off: $60+40=100$.
- And here is another one:

$$
1+99=100 .
$$



1. How many more can you find?
2. Do you think you found them all?

Addition and subtraction

## Addition and subtraction

Knowing an addition fact can help you work out a subtraction
 fact with the same numbers.
If you know that $5+4=9$, you can use it to work out that $9-5=4$.


1. Fill in the missing amounts in these two sets.
a. $14 \mathrm{~cm}+5 \mathrm{~cm}=$ $\square$ cm
b. $11 p+7 p=\square p$
$\square \mathrm{cm}+14 \mathrm{~cm}=19 \mathrm{~cm}$

$$
\begin{aligned}
& 19 \mathrm{~cm}-\square \mathrm{cm}=5 \mathrm{~cm} \\
& 19 \mathrm{~cm}-5 \mathrm{~cm}=\square \mathrm{cm}
\end{aligned}
$$

$\square p+11 p=18 p$
$18 p-\square p=7 p$
$18 p-7 p=\square p$
2. Now answer these questions:
a. $17 \mathrm{~m}+12 \mathrm{~m}=\square \mathrm{m}$
$\square m+17 m=29 m$

$$
29 \mathrm{~m}-\square \mathrm{m}=17 \mathrm{~m}
$$

$$
\begin{equation*}
29 \mathrm{~m}-17 \mathrm{~m}=\square \mathrm{m} \tag{g}
\end{equation*}
$$

b. $30 g+50 g=\square g$

$$
80 g-\square g=50 g
$$

f
$\square g+30 g=80 g$

$$
80 g-50 g=\square g
$$

## Inverse match

Inverse means the opposite. Subtraction is the inverse (the opposite) of addition.
Look at the addition $4+\dot{3}=7$. The inverse is $7-3=4$. Tip: The subtraction always starts with the total from the addition.

Draw a line to match each addition to its inverse subtraction.

| $3+2=5$ | $35-20=15$ |
| :---: | :---: |
| $5+10=15$ | $58-32=26$ |
| $14+5=19$ | 15-10=5 |
| $11+10=21$ | $5-2=3$ |
| $13+12=25$ | $59-35=24$ |
| 15+20=35 | $25-12=13$ |
| $16+30=46$ | $43-23=20$ |
| $20+23=43$ | $46-30=16$ |
| $24+35=59$ | 19-5 = 14 |
| $26+32=58$ | $21-10=11$ |

## Addition and subtraction

## Adding order

You can add numbers in any order:
so $5+3=8$, but $3+5=8$ as well.
It is easier to start with the larger number. Put the larger number in your head and count on the smaller number.

1. Rewrite with the larger number first. Then find the totals.

$$
\begin{aligned}
& \text { a. } 5+13=13+5=18 \\
& \text { b. } 8+11=\square=\square \\
& \text { c. } 3+16=\square \\
& \text { d. } 6+14=\square \\
& \text { e. } 5+12=\square \\
& \text { f. } 3+17=\square
\end{aligned}
$$

2. Use each number to make six sums. Put the larger number first each time. Find all the answers.
$\ldots+\ldots=$

$\qquad$ $+$ $\qquad$
$\qquad$
$\qquad$

$\qquad$ $+$ $\qquad$ $=$ $\qquad$
$++\ldots=$

$\qquad$ $+$ $\qquad$ $=$ $\qquad$
whumuwhow

## Addition and subtraction

## Totals to 10

Adding three numbers is easier if you can find two numbers that total 10 , for example, to add 8,6 , and 4 : start by adding 6 and $4(10)$ and then add $8.10+8=18$.

Choose three numbers to add together.
Make sure that two of them total 10. Next, add the third number.

$$
\begin{array}{llllllllllll}
2 & 3 & 4 & 6 & 7 & 8 & 12 & 13 & 14 & 16 & 17 & 18
\end{array}
$$

| Numbers <br> chosen | Numbers <br> totalling 10 | Addition |
| :--- | :--- | :--- |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

## Addition and subtraction

## Addition problems

Read the problem. Try different methods to solve them. Write down each correct addition sentence.

1. Unlucky Ducky is trying to make the number 13 with these cards. How many different ways could she do it, using number 6 as one of the cards each time?

$\square$

$\qquad$
2. How many ways can you score 12 by rolling three dice?


## Party subtraction problems

Read each problem. Write a subtraction sentence for each one. Work out the answer.
Tip: Each sentence starts with the larger number, 20.
On Saturday, Sam had a birthday party.

1. 20 friends came to his party. 3 were girls. How many were boys?
$\qquad$

2. He received 20 presents.

5 were in bags.
The rest were in boxes.
How many presents were in boxes?
$\qquad$

5. He made 20 sandwiches. 11 were jam. The rest were cheese. How many were cheese?
2. He blew up 20 balloons.

12 were blue. The rest were yellow.
How many balloons were yellow?
$\qquad$

4. He made 20 hats. 14 were stripy.
The rest were spotty. How many were spotty?
$\square$

6. He had 20 candles on his cake. 7 were pink. The rest were orange. How many were orange?


