

1

Playing with numbers



Every Saturday I buy a Lotto ticket. My favourite number is 4, so I always choose that. I don't know why, but I just like it. The number 4 is in my house number, 24. It is also in my age. What age might I be? 24? 34? 44? Sorry, I won't tell you that!

I also choose numbers that mean something to me, like my birthday, my wedding anniversary or my children's ages.

Sometimes I don't know which numbers to choose, so then I just look around me. Numbers are everywhere!

I also like games that use numbers like bingo, card games, dice, dominoes and Nim.

Talk about it

- Do you play any games that involve numbers?
- Do you have a favourite number? What is it?
- Do you play the lotto?
- What numbers do you choose? Why?

These are the skills you will practise in this unit.

Which are the most useful for you? Tick the boxes.

- | | |
|--|---------|
| <input type="checkbox"/> Read, write and use numbers up to 100 | N1/E2.2 |
| <input type="checkbox"/> Add and subtract numbers over 10 | N1/E2.3 |
| <input type="checkbox"/> Remember number facts to 10 | N1/E2.4 |
| <input type="checkbox"/> Multiply single-digit numbers | N1/E2.5 |
| <input type="checkbox"/> Round numbers to the nearest 10 | N1/E2.6 |
| <input type="checkbox"/> Use the symbols +, −, × and = | N1/E2.7 |
| <input type="checkbox"/> Learn how to use a calculator | N1/E2.8 |

Numbers everywhere!

Talk about it

I come across numbers every day. I need to be able to read numbers and know what they mean.



Activity 1

Write the **single digits** 0–9 in order.

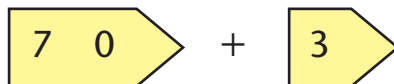
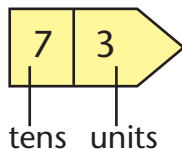
.....

All numbers can be made using these digits.

Look at the bus number. It has two digits, 7 and 3.

The 7 is in the **tens** column, so it is 7 tens or 70.

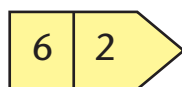
The 3 is in the **units** column, so it is simply 3.



This number is read as **seventy** **three**

Activity 2

1



is in the tens column, so it is .

is in the units column, so it is .



This number is read as

Check your answer with your teacher before going on.

2  =  + 

This number is read as

3  =  + 

This number is read as

4  =  + 

This number is read as

Check your answers before going on.



Activity 3

In this story the numbers have been left out. You should fill them in from either (a) the number your teacher reads out or (b) your own story. Your teacher will tell you which.

On Saturday I wake up at in the morning. I have

breakfast and ring a friend. The telephone number is

..... . We decide to meet in town, so I take

bus number We go to the shops. I buy a lotto ticket

and choose these numbers:

..... . I also buy a newspaper forp.

Remember

- We use numbers every day. We can make any number using the digits 0,1,2,3,4,5,6,7,8,9 in different positions.



Activity 4

These are the costs of three newspapers.

Which is the cheapest and which is the dearest?



Start by writing them in order, cheapest first.

To do this, look at the **tens** digit first. The smallest tens digit is 2 (28p).

The next smallest tens digit is 3 (35p).

The biggest tens digit is 6 (62p).

So from cheapest to dearest the papers are 28p 35p 62p.

Write these in order from cheapest to dearest.

1 55p 67p 28p

Check your answer with your teacher before going on.

2 49p 18p 66p

3 20p 92p 16p 37p

If two numbers have the same tens value, look at the units to decide which is smaller. For example: 67p 63p

Both have 6 in the tens place.

3 is less than 7, so 63 is less than 67: 63p 67p.

Write these in order from cheapest to dearest.

4 74p 29p 27p 63p

Check your answer with your teacher before going on.

5 37p 38p 32p 35p

Remember 7 on its own is in the units.

6 27p 37p 57p 7p



Activity 5

These are the six main balls from the lotto for three draws. Re-arrange them from smallest to largest.

1      

.....

2      

.....

3      

.....



Activity 6

Look at this grid of numbers 0–99. Some are missing.

Fill in the missing numbers. Look at the surrounding numbers to help you.
Look for patterns in the numbers.

0	1	2	3		5	6	7	8	9
10		12		14	15	16		18	19
20	21		23	24		26	27	28	
30	31	32	33	34	35			38	39
	41	42		44	45	46	47		49
50	51	52	53		55		57	58	59
60		62	63	64		66	67		
	71		73	74	75		77	78	
80	81			84	85	86	87		89
	91	92	93				97	98	



Do you need more practice in using two-digit numbers?

Yes ☐

No ☐

For more work on this, go to H1/H2 (page 21).

This work links to mini-project M1 (page 24).

An odd number

Talk about it

Sometimes you hear phrases like, 'Put out an even number of chairs on each side' or 'There are an odd number of people coming – can we find someone else?' What does it mean to say numbers are **odd** or **even**?



10 is an even number. It can be shared equally between the two plates.

9 is an odd number. It cannot be shared equally between the two plates.

Do you think 8 is odd or even?

Remember

- An even number can be split into two equal groups. An odd number will always leave one extra.



Activity 7

- 1 Try to share each packet of biscuits between the two plates. Use cubes or counters and put them into two equal groups. Draw the biscuits on the plates.



16 is an number

2



7 is an number



Check your answer with your teacher before going on.



Activity 8

- 1 Collect counters or pennies for each of these numbers. Try to split each number **equally**. Ring the **even** numbers.

4 12 7 6 10 15 22 14 11

- 2 Now look at these numbers. Which do you think are even? Which are odd? Use counters if you like. Ring the even numbers. Look at the pattern made.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30



Activity 9

Play this game to practise using and thinking about numbers.

Play with another adult. Choose a number secretly. Can the other person guess your number by asking questions? Try to ask general questions first. Example questions are in the circles. Who can ask the fewest questions?

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	29	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Is it an odd number?

Is it an even number?

Is it less than 30?

Is it more than 50?

Do you need more practice in odd and even numbers?

Yes ☐

No ☐

For more work on this, go to H3 (page 21) or E1 (page 23).

It all adds up

Talk about it

Sometimes when I play card games I need to add numbers together to find the total.



You can add numbers together in any order. Putting the larger number first and counting on can make some additions easier.

To add 5 and 11 (+ is the sign for addition)
 put the larger number first $11 + 5$ ($11 + 5$ is the same as $5 + 11$)
 and count on 5 12, 13, 14, 15, 16
 $5 + 11 = 16$



Activity 10

Play the game of '21' with a pack of playing cards.

One person is the dealer and deals two cards to each player face **down**.

Picture cards are worth 10; an ace is worth 1 or 11.

Look at your card.

The dealer then asks if you want to 'twist' – this means to get another card, which is dealt face **up**.

If you don't want to 'twist' you can 'stick' – not have any more.

You can 'twist' more than once.

Try to make or get as near to 21 as you can without going above it.



Player A
 $11 + 6 = 17$



Player B
 $10 + 11 = 21$



Player C
 $10 + 8 + \dots = \dots$
 (too many)



Player D
 $2 + 1 + 4 + \dots + \dots = \dots$

Player **B** wins this round with 21.

If you need to, ask your teacher to help you to start the game.

Remember

- Addition can be done in any order. The sign + means **add**.

Activity 11

Another way to make adding easier is to find **pairs** of numbers that make ten, eg 6 and 4.

Count on to find the missing numbers.

Fill in the spaces and try to learn these pairs of numbers by heart.

$$\begin{array}{lll} 1 & 2 + \underline{8} = 10 & 2 & 6 + \dots = 10 & 3 & 9 + \dots = 10 \\ 4 & 7 + \dots = 10 & 5 & 5 + \dots = 10 \end{array}$$

Remember addition can be done in any order, so move the numbers around to find ways of making ten and then add. For example:

$7 + 5 + 3$ move the numbers around to $7 + 3 + 5$, ($7 + 3 = 10$), $10 + 5 = 15$

$$6 \quad 3 + 9 + 7 = \quad 7 \quad 6 + 8 + 4 = \quad 8 \quad 8 + 11 + 2 =$$

Activity 12

Another way to make adding easier is to break up two-digit numbers into chunks of tens and units. Some people call this the chunky method.

Example $23 + 7$ is the same as $20 + 3 + 7$
so $20 + 10 = 30$ $23 + 7 = 30$

Example $24 + 15$ is the same as $20 + 4 + 10 + 5$,
is the same as $20 + 10 + 4 + 5$,
so $20 + 10 + 9 = 39$ $24 + 15 = 39$

I know
 $3 + 7$ equals 10

4 add 5
equals 9

If I'm in a hurry, I go to the local corner shop to buy some things.

Add these items together, breaking them down into tens and units.

Use paper and pencil, cubes or counters to help you.

1		2		1	Total p
				2	Total p
3		4		3	Total p
				4	Total p



Activity 13

You have seen how to put the larger number first and find ways of making ten. Another method is to look for **doubles**.

Doubles are the same number added twice. For example:

$$3 + 3 = 6 \quad 8 + 8 = 16$$

A double total is always an even number.

Try to learn doubles of numbers up to 10 by heart.

1 $1 + 1 =$	2 $2 + 2 =$	3 $3 + 3 =$	4 $4 + 4 =$
5 $5 + 5 =$	6 $6 + 6 =$	7 $7 + 7 =$	8 $8 + 8 =$
9 $9 + 9 =$	10 $10 + 10 =$	11 $20 + 20 =$	12 $30 + 30 =$



Activity 14

In pairs play a game of dominoes. Place all dominoes face down. Take six each and keep them secret by placing them where the other person cannot see them. Leave others in a pile. Take turns putting down one domino at a time. You must match the dominoes with the same number of dots. Call out the **double** as you put them together. Take another domino or miss a turn if you cannot match the dots. Whoever uses the dominoes up first wins the game!



Double 5 is 10



Activity 15

Near doubles are numbers just 1 or 2 away. For example, 7 and 8, 10 and 12.

You can use your knowledge of doubles to help you work out additions.

Example (a) $3 + 4$ (4 is $3 + 1$)

$$3 + 3 + 1 \text{ (double 3 is 6)}$$

$$\text{so } 3 + 4 = 7$$

Example (b) $11 + 10$ (11 is $10 + 1$)

$$10 + 1 + 10 \text{ (double 10 is 20)}$$

$$\text{so } \dots + \dots = \dots$$

Add these near doubles.

Use your knowledge of doubles to find the answer to question 1.

Check your answer with your teacher before going on.

1 $8 + 7 =$	2 $6 + 7 =$	3 $11 + 12 =$
4 $19 + 18 =$	5 $14 + 15 =$	6 $21 + 21 =$

Activity 16

THE STORE LTD	

FRUIT	23p
EGGS	48p
BEANS	26p
TOTAL	97p
****THANKYOU****	

On a till receipt, all the numbers are in a **column**. The unit digits are lined up and so are the tens digits. This makes it very easy to read.

When using paper and pencil, we often write addition in **columns**. You need to be careful about lining up the unit digits under units and the tens digits under the tens.

This is one way of working in columns.

It's just like the chunky method

Examples

1

	tens	units	
THE STORE LTD	3	3	33 is 30 and 3

MILK	33p		
CRISPS	15p		15 is 10 and 5
	+ 1	5	
		8	Add the units first
TOTAL	40		Add the tens
*****		8	Then add together
		48	

2

26	26 is 20 and 6	
+ 37	37 is 30 and 7	
13	6 + 7 = 13, 13 is 1 ten and 3 units	
50	20 + 30 = 50	
63	13 + 50 = 63	

THE STORE LTD	

BEANS	26p
FRUIT	37p
TOTAL	63p
THANKYOU	

Write out the additions carefully on paper. Remember to add the units to the units and the tens to the tens.

Add each receipt.

1

THE STORE LTD	

NAILS	12p
BOLTS	23p
THANKYOU	

2

THE STORE LTD	

APPLE	15p
BANANA	22p
THANKYOU	

3

THE STORE LTD	

PENCIL	41p
STAMP	27p
THANKYOU	

Check your answer with your teacher before going on.

Work these out in the same way. The units may add up to more than ten.

4

THE STORE LTD	

GUM	33p
SWEETS	28p
THANKYOU	

5

THE STORE LTD	

CRISPS	27p
DRINK	55p
THANKYOU	

6

THE STORE LTD	

TOOTHBRUSH	53p
SOAP	39p
THANKYOU	

Do you need more practice in addition?

Yes ☐ No ☐

For more work on this, go to H4 (page 21) or E2 (page 23).

This work links to mini-project M2 (page 24).

Take it away!

Talk about it

I go into the shop to buy some milk. It costs 33p. I hand the cashier a 50p piece. How much change should I get back?

Will the change be correct?
How can you work it out?

Subtraction is the **inverse** of addition – that means that it ‘undoes’ addition or goes the opposite way from addition.

Like addition, there are different ways you can subtract.

With addition the answer is always **more** than the numbers you are adding. When you subtract from a number you are left with **less** than you started with.



Here is a plate of 5 cakes.

I'm hungry, so I eat 2.

How many are left on the plate?

I take away or subtract 2 from 5, leaving 3.

$5 \text{ cakes} - 2 \text{ cakes} = 3 \text{ cakes}.$

Activity 17

— is the symbol for subtraction. Try these subtractions. Use counters if you think it will help you.

1 $10 - 6 =$



Check your answer with your teacher before going on.

2 $17 - 5 =$ 3 $13 - 8 =$ 4 $20 - 4 =$

5 $19 - 11 =$ 6 $24 - 9 =$

Remember

- Put the larger number first when subtracting.
The sign — means **take away**.

Talk about it

Subtraction is the **inverse** of addition.

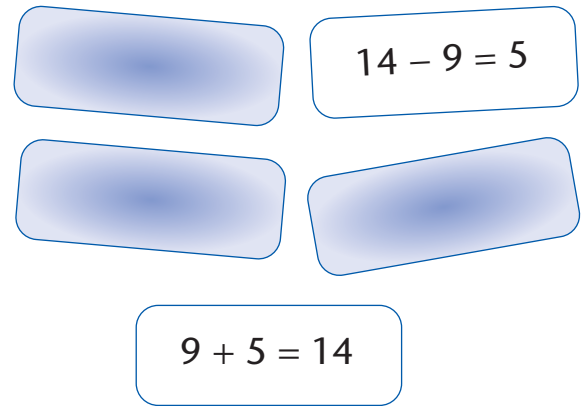
For every addition fact, there is a subtraction fact.

If I know $7 + 3 = 10$ then I also know $10 - 3 = 7$



Activity 18

Work in pairs. Your teacher will give you 10 fact cards: 5 addition and 5 related subtraction cards. Look at the cards and match up the pairs of related facts. Then mix them up and lay them face down on the table. Take turns to turn over two cards. If you find a pair, remove those cards. If not, turn them back down, and it's the other person's turn.

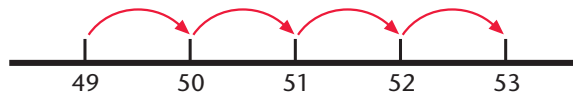


Talk about it

What is the **difference** in price between the two cans of drink? How much money can you save if you buy the cheaper one? When we talk about difference, we are really subtracting.



The numbers are close together, so it isn't a big difference. I can count up from 49 to 53. That's 4, so $53p - 49p = 4p$.



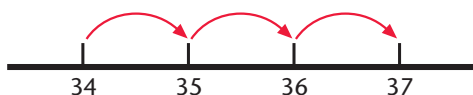
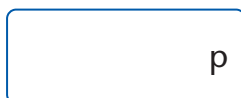
The price is often different, for the same product.

How much can you save on each product?

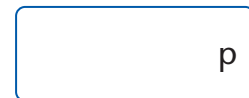
Activity 19

Count up to find the difference in price between each two items.

1



2



Check your answer with your teacher before going on.

3


 p

4


 p

5

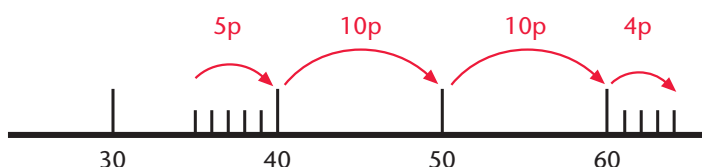

 p

Sometimes the price differences are even bigger! The supermarket is much cheaper than the corner shop. Look at these:








One way of counting the difference is

Difference is $5p + 10p + 10p + 4p = 29p$



Activity 20

Work out the differences in these prices.

	Super-market	Corner Shop	Difference		Super-market	Corner Shop	Difference
	59p	97pp		43p	76pp
	55p	83pp		37p	84pp
	28p	62pp				



Activity 21

Try subtracting 11 or 21 like this. 11 is one **more** than 10.

So subtract 10 and then take away 1 more.

For example to work out $40 - 11$, do $40 - 10 = 30$ and $30 - 1 = 29$

so $40 - 11 = 29$.

1 $30 - 11$ To work it out do $30 - 10 =$ and $- 1$
so $30 - 11 =$

Check your answer with your teacher before going on.

2 $45 - 21 =$ 3 $63 - 31 =$ 4 $93 - 51 =$

5 $67 - 41 =$ 6 $85 - 71 =$




Activity 22

Often prices end in a 9, like 99p. These can be quite easy to subtract, because 9 is one **less** than 10.

I have 20p and an orange costs 9p. I can work out $20 - 10 = 10$ and then add back the 1 so: $20 - 9 = 11$.


I have 50p and an apple costs 19p. $50 - \dots = \dots$ then add back the 1
so $50 - 19 = \dots$ Work out how much change you will get.

1 I have . I buy two pears for 29p. I will havep left.

Check your answer with your teacher before going on.

2 I have . I buy some plums for 19p. I will havep left.

3 I have . I buy some limes for 39p. I will havep left.

4 I have . I buy a lemon for 19p. I will havep left.



Do you need more practice in subtraction?

Yes ☐

No ☐

For more work on this, go to H5 (page 21), H7/H8 (page 22) or E3 (page 23).

This work links to mini-project M2 (page 24).

Round about

Talk about it



I like to know how much money I need before I go to the shops. If I want a newspaper and a pint of milk, will I have enough money? I roughly work out the prices then check my wallet. To do this I round to the nearest 10p.

A tin of baked beans cost 28p.

This is more than 20p but less than 30p.



28p is over half way between 20p and 30p.

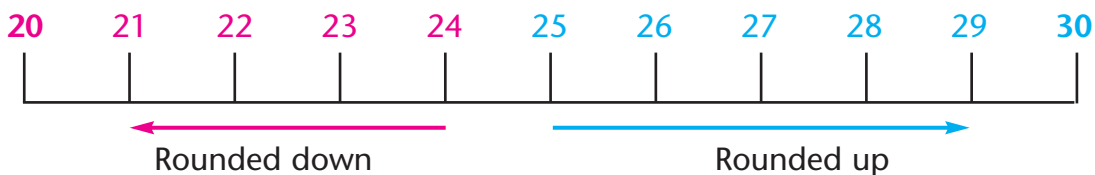
28p is nearer 30p,

so I **round up** to 30p.

21p, 22p, 23p, 24p are all nearer to 20p.

26p, 27p, 28p, 29p are nearer to 30p.

25p is exactly halfway but this is **always rounded up**.



Remember

How to round to the nearest 10:

- If the unit digit is 1, 2, 3, 4, the nearest 10 is the 10 below.
- For 5, 6, 7, 8, 9, the nearest 10 is the 10 above.

Activity 23

Look at the prices. Round each to the nearest 10p.



Check your answers with your teacher before going on.

Activity 24


Round each price to the nearest 10p.

Add together and look at the coin.

Will it be enough?

Ring 'yes' or 'no'.

1



..... + =



yes or no

2



..... + =



yes or no

3



..... + =



yes or no

Activity 25

Rounding and **approximating** are useful skills in measuring.

Look at the tape measures and round the measurements marked up or down to the nearest 10 cm. (For more work on centimetres, see Unit 4.)



Do you need more practice in rounding to ten?

Yes

☐

No

☐

This work links to mini-project M4 (page 24).

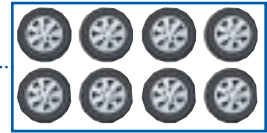
Easy times

Talk about it

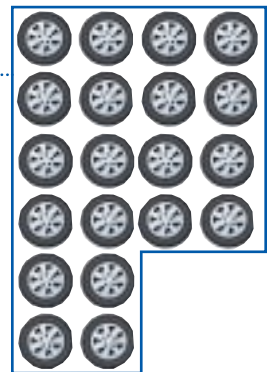
Our garage gets cars in that need all their tyres changed. If 1 car comes in, that's OK. I know 1 car has 4 tyres, so I order 4 tyres.



If 2 cars come in, I can work it out. Each car has 4 tyres and $4 + 4 = 8$, so I order 8 tyres.



What if 5 cars come in? I know I will be very busy that day! But how can I work out how many tyres I need to order quickly? I could add them $4 + 4 + 4 + 4 + 4 = 20$, or I could multiply them.



5 cars with 4 tyres each = 20 tyres $4 + 4 + 4 + 4 + 4 = 20$

Remember

- **Multiplication** is repeated addition. The sign \times means **multiply**.

$$5 \times 4 = 20$$

Activity 26

1 car with 4 tyres = 4 tyres

4



2 cars with 4 tyres = 8 tyres

$4 + 4 = 8$



3 cars with 4 tyres each = 12 tyres

$4 + 4 + 4 = 12$



How many tyres will 4 cars need?

4 cars with 4 tyres each = tyres

Check your answer with your teacher before going on.

Work out how many tyres are needed for these cars. Use drawings or counters if you think it will help you.

1 6 cars

2 10 cars

3 7 cars



Activity 27

Look at the baking tray.

It holds 15 cakes.

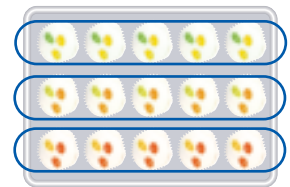
There are 5 rows with 3 cakes in each row.



5 groups of 3: $3 + 3 + 3 + 3 + 3 = 15$

5 rows \times 3 cakes = 15 cakes or $5 \times 3 = 15$

If you turn the tray around there are still 15 cakes, but now there are 3 rows with 5 cakes in each row:



3 groups of 5: $5 + 5 + 5 = 15$

3 rows \times 5 cakes = 15 cakes or

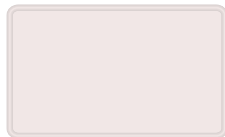
$3 \times 5 = 15$

Multiplication is adding groups of the same number together over and over.

You can say 3 groups of 5, or 3 lots of 5, or 3 times 5, or 3×5 . It all means the same thing.

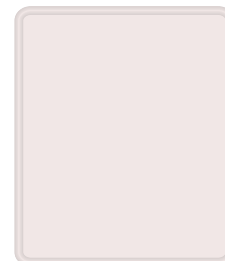
Draw the cakes on the tray and fill in the multiplication.

1 2 rows of 4



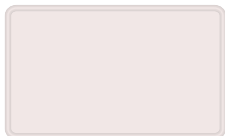
$2 \times 4 =$

2 4 rows of 3



$4 \times 3 =$

3 3 rows of 6



$3 \times 6 =$

Activity 28

Doubling is multiplying by 2.

Double 4 is the same as $4 + 4$, 2×4 , and 4×2 .

Work out these doubles.

1 $2 \times 10 =$ 2 $2 \times 3 =$ 3 $2 \times 7 =$

4 $5 \times 2 =$ 5 $9 \times 2 =$ 6 $2 \times 8 =$



Do you need more practice in multiplication?

Yes ☐


No ☐

For more work on this, go to H6 (page 22) or M3 (page 24).

Calculate it



Activity 29

Always clear the calculator before starting any work. Use the  key to do this.

Put in the tens first in a two-digit number.

So to put in 42, press



then



Try putting in these two-digit numbers.

36

79

20

61

54

Show your teacher that you can enter a two-digit number in your calculator.



Activity 30

You can use a calculator to help with addition, subtraction and multiplication.

To add 32 and 41 on a calculator:

Estimate first what you think the answer will be: about 70?

Clear the display then press



.....

To add $23 + 14$ on a calculator:

estimate first. About?

Clear the display and press



.....

Check your answer with your teacher before going on.

Let's go back to the corner shop. Try working out the cost of these items using a calculator. Always estimate first so you have a rough idea of the answer.

		Estimate	Calculator
1 Add	 
2 Subtract	 
3 Multiply	  



Do you need more practice in using a calculator?

Yes

☐

No

☐

For more work on this go to H7 (page 22).

This work links to mini-project M4 (page 24).

Activity H1

Play bingo. There are many versions of this game.
Your teacher will organise the game.

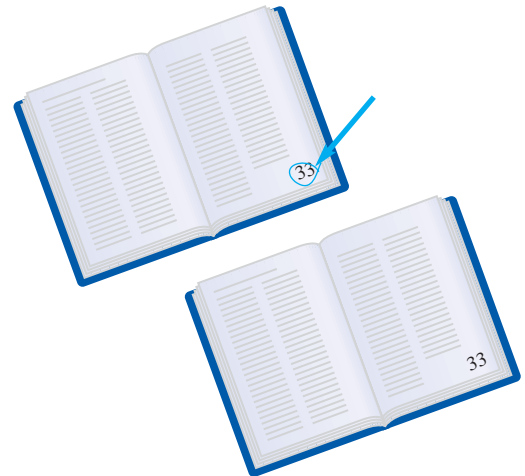
Activity H2

Work with another person.

Get two copies of the same book. Look up a two-digit page number and ask the other person to find it.

Did they find the correct page? Do the pages match?

Take turns trying to find the pages.



Activity H3

Take a handful of cubes from a tray. Count the cubes. Try to make two equal towers. If you have an even number, you will make two equal towers. If you have an odd number, one tower will be taller than the other.

Write down the number of cubes you took in the 'Odd' or 'Even' row.

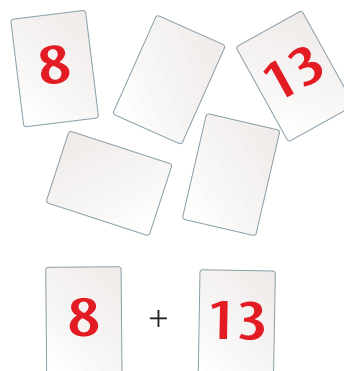
Odd numbers	5
Even numbers	



I can't make the towers the same, so 5 is an odd number.

Activity H4

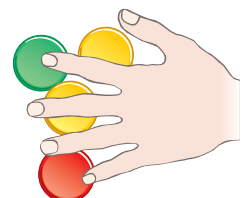
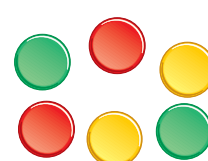
Work with another person. Spread number cards 1–20 face down on a table. Take turns to turn over two cards and add them together in your head, putting the larger number first. Discuss how you added the numbers. Remove these numbers after your turn.



I put 13 first and counted on 8 on my fingers to get 21.

Activity H5

Work with another person. Put out 10 counters in front of you. Ask the other person to close their eyes and take some of the counters away. Can they work out how many you have taken? Take turns. Try this with 20 counters.





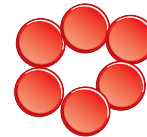
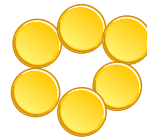
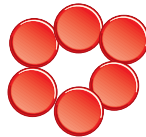
Activity H6

Use 24 counters or cubes.

How many different ways can you find to make equal groups of counters?

Write the combinations.

For example, 4 groups of 6



Activity H7

Check these calculations on a calculator. Some may be wrong!

If the calculation is correct, tick it. If it is wrong, correct it.

- | | | |
|---|--|--------------------------|
| 1 | 3 teas + 8 teas = 11 cups of tea | <input type="checkbox"/> |
| 2 | 22 window seats + 26 non-window seats = 50 seats | <input type="checkbox"/> |
| 3 | 50p – 38p = 14p | <input type="checkbox"/> |
| 4 | The difference between 49 and 38 is 11 | <input type="checkbox"/> |
| 5 | 3 books of 4 stamps = 21 stamps | <input type="checkbox"/> |
| 6 | 2 pints of milk at 34p each = 68p | <input type="checkbox"/> |

Activity H8

Write four related facts for each set of three numbers using +, – and = symbols.

eg

2, 7, 9

$2 + 7 = 9$	$7 + 2 = 9$
$9 - 7 = 2$	$9 - 2 = 7$

8, 5, 3

1		

6, 4, 10

2		

11, 20, 9

3		

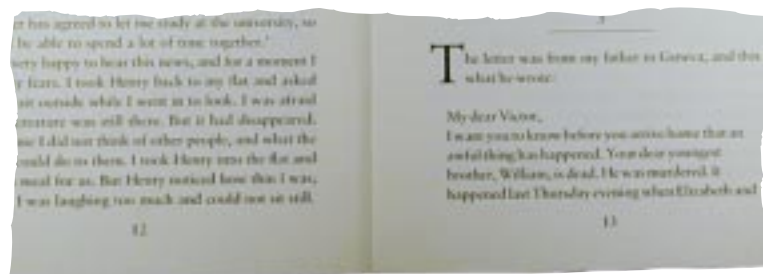
16, 23, 7

4		

Extension

Activity E1

- Look at book pages. Where are the odd numbers – on the left or right? Is it the same in every book? Investigate.



- How many months have an odd number of days in them? Investigate.

Activity E2

A magic square

Why is this square 'magic'? Try adding a row of numbers. Try adding another row. What happens?

16	3	2	13
5	10	11	8
9	6	7	12
4	15	14	1

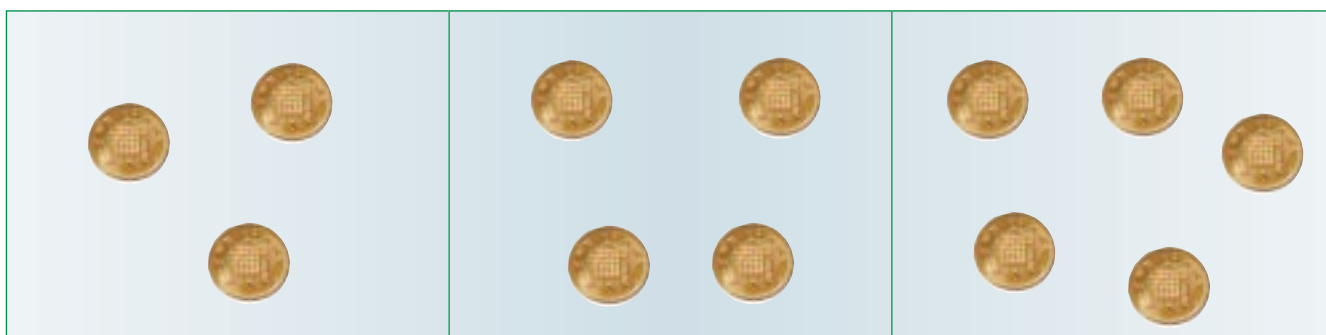
How many different ways are there of making the same total? Can you find them all?

Can you make your own 3 x 3 magic square using digits 1–9? Are there other ways to do it?

OCTOBER	
Monday	7 14 21 28
Tuesday	1 8 15 22 29
Wednesday	2 9 16 23 30
Thursday	3 10 17 24 31
Friday	4 11 18 25
Saturday	5 12 19 26
Sunday	6 13 20 27

Activity E3

This is Nim, a game from China. Play with another person and use 12 pennies or counters. Lay out the counters on the board below. Take turns to take away as many pennies as you like from **one** box. The winner is the person who takes away the last penny.





Mini-projects



Activity M1

Look for numbers inside and outside your home. Make a note of where you see them. Why are they being used?



Activity M2

Play the game 'broken calculator'. Imagine that some of the digit keys on your calculator don't work. Try to make certain numbers on the display without using their digits.

You will need to add, subtract or multiply to get the required number. For example:

Make 35 without using the digits 3 and 5.

The answer might be $29 + 6 = 35$

Try to make these numbers:

1 12 2 15 3 24 4 42 5 67 6 93



Activity M3

Look at this dartboard. When a dart lands in the outer ring you double the number.

Go around the board and work out the doubles for all the numbers.

Find out how to score a treble.

Now work out the trebles for all the numbers.

So this dart scores 40
(double 20 or 20×2)



Activity M4

Take a calculator when you go shopping.

Estimate the total price of three or four items by rounding to the nearest 10p.

Work out the actual total on the calculator.

Prices of items	My estimate of total	Calculator total
14p, 33p, 26p	70p $10 + 30 + 30 = 70p$	73p



Check it



Activity C1

1 Write these numbers in order from smallest to largest.

23

76

28

84

92

9

.....



Activity C2

1 Round these prices to the nearest 10p.

28p

14p

75p

89p

61p

35p

.....

Activity C3

Work out these additions.

$$\begin{array}{r} 1 \quad 1 \ 4 \\ + 3 \ 5 \\ \hline \end{array}$$

$$\begin{array}{r} 2 \quad 1 \ 7 \\ + 2 \ 8 \\ \hline \end{array}$$

$$\begin{array}{r} 3 \quad 5 \ 5 \\ + 2 \ 5 \\ \hline \end{array}$$





Activity C4


Calculator skills.

Draw in the calculator keys.

Before I start I clear the display using the  key.

To enter 36 on a calculator I first put in number  then number 

To add numbers together I use the  key.

To subtract I use the  key.

To multiply I use the  key.



Activity C5

Ring which **method** (addition, subtraction or multiplication) you would use to work out these problems.

1 I want to compare these prices. What is the difference?

addition

subtraction

multiplication



2 I want to buy 5 books of 6 stamps. How many stamps do I get?

addition

subtraction

multiplication



3 I want to buy these things. How much will it cost altogether?

addition

subtraction

multiplication



How am I doing?

Now look back at the skills listed on page 1.

Then finish the sentences below.

I am confident with

.....
.....

I need more practice with

.....

Date

Activity 1

0, 1, 2, 3, 4, 5, 6, 7, 8, 9

Activity 2

1

is in the tens column, so it is

is in the units column, so it is

= +

We read the number as ...sixty... two...

2 is +

We read the number as ...thirty... four...

3 is +

We read the number as ...forty...

4 is +

We read the number as ...twelve...

Activity 3

Answers will vary.

Activity 4

- 1 28p, 55p, 67p
- 2 18p, 49p, 66p
- 3 16p, 20p, 37p, 92p
- 4 27p, 29p, 63p, 74p
- 5 32p, 35p, 37p, 38p
- 6 7p, 27p, 37p, 57p

Activity 5

- 1 13, 17, 23, 27, 29, 46
- 2 14, 19, 33, 35, 39, 41
- 3 5, 12, 22, 25, 29, 49

Activity 6

A completed number square

Activity 7

- 1 even
- 2 odd

Activity 8

- 1 4, 12, 6, 10, 22, 14
- 2 All even numbers. Numbers ending in 0, 2, 4, 6, 8 ringed

Activity 9 and Activity 10

Game

Activity 11

- 1 8
- 2 4
- 3 1
- 4 3
- 5 5
- 6 19
- 7 18
- 8 21

Activity 12

- 1 50p
- 2 38p
- 3 48p
- 4 80p

Activity 13

- 1 2
- 2 4
- 3 6
- 4 8
- 5 10
- 6 12
- 7 14
- 8 16
- 9 18
- 10 20
- 11 40
- 12 60

Activity 14

Game

Activity 15

- 1 15
- 2 13
- 3 23
- 4 37
- 5 29
- 6 42



Activity 16

- 1 35p
- 2 37p
- 3 68p
- 4 61p
- 5 82p
- 6 92p

Activity 17

- 1 4
- 2 12
- 3 5
- 4 16
- 5 8
- 6 15

Activity 18

Game

Activity 19

- 1 3p
- 2 7p
- 3 3p
- 4 7p
- 5 5p

Activity 20

- 1 38p
- 2 28p
- 3 34p
- 4 33p
- 5 47p

Activity 21

- 1 19
- 2 24
- 3 32
- 4 42
- 5 26
- 6 14

Activity 22

- 1 21p
- 2 21p
- 3 31p
- 4 6p

Activity 23

20p 30p 50p 20p 60p

Activity 24

- 1 $20p + 20p = 40p$ Yes
- 2 $30p + 60p = 90p$ Yes
- 3 $70p + 20p = 90p$ Yes

Activity 25

- 1 30 cm
- 2 50 cm
- 3 80 cm
- 4 70 cm

Activity 26

- 1 24
- 2 40
- 3 28

Activity 27

- 1 8
- 2 12
- 3 18

Activity 28

- 1 20
- 2 6
- 3 14
- 4 10
- 5 18
- 6 16

Activity 29

Calculator use

Activity 30

- 1 Estimate 90p, calculator 91p
- 2 Estimate 15p, calculator 15p
- 3 Estimate 90p, calculator 84p

Help

H1–5

Answers will vary.

H6

- 1 group of 24
- 2 groups of 12
- 3 groups of 8
- 4 groups of 6
- 6 groups of 4
- 8 groups of 3
- 12 groups of 2
- 24 groups of 1



H7

- 1 ✓
- 2 ✗
- 3 ✗
- 4 ✓
- 5 ✗
- 6 ✓

H8

1	$5 + 3 = 8$	$3 + 5 = 8$
	$8 - 3 = 5$	$8 - 5 = 3$

2	$6 + 4 = 10$	$4 + 6 = 10$
	$10 - 6 = 4$	$10 - 4 = 6$

3	$11 + 9 = 20$	$9 + 11 = 20$
	$20 - 11 = 9$	$20 - 9 = 11$

4	$16 + 7 = 23$	$7 + 16 = 23$
	$23 - 7 = 16$	$23 - 16 = 7$

Extension

E1

Months with odd numbers of days are Jan, Feb (in leap year), Mar, May, Jul, Aug, Oct, Dec.

E2

All rows columns and diagonals add up to 34,

E3

Game

Mini projects

M1

Answers will vary.

M2

Answers will vary.

M3

Number	Double	Treble	Number	Double	Treble
20	40	60	1	2	3
5	10	15	18	36	54
12	24	36	4	8	12
9	18	27	13	26	39
14	28	42	6	12	18
11	22	33	10	20	30
8	16	24	15	30	45
16	32	48	2	4	6
7	14	21	17	34	51
19	38	57	3	6	9

M4

Answers will vary.

Check it

C1

1 9, 23, 28, 76, 84, 92

C2

2 30p, 10p, 80p, 90p, 60p, 40p

C3

- 1 49
- 2 45
- 3 80

C4



C5

- 1 subtraction
- 2 multiplication (or add, add, add, add)
- 3 addition

If you have a different answer discuss it with your teacher.