



Helping Your Child at Home Maths



Nursery to Year 5

All children are different

If you ask something that is too difficult try and make it easier. Then step by step.

Don't turn them off maths or make them feel like they just can't do it.

Praise effort.

Make it fun!

Everyday maths

Board games

Resources

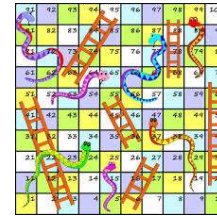
Time v. Everyday maths

Modelling (doing or showing how)

Year 2 and Year 6 SATs

Parent's Guide

Websites

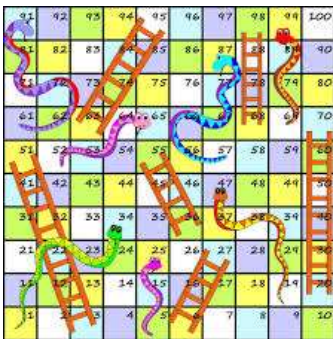


1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100



Don't forget the things you may already do!

- Singing nursery rhymes and counting songs
- Counting everyday things
- Board games



Counting and calculating

Resources 100 Square

Counting
Counting in 10's, 5's, 2's
Noticing patterns
Times tables
Adding and subtracting

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	39	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

To calculate $6 + 11$

$$6 + 10 = 16$$

$$16 + 1 = 17$$

Example from a 100 square

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20

To calculate $4 + 9$

$$4 + 10 = 14$$

$$14 - 1 = 13$$

Example from a 100 square

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20

COMPENSATING USING A 100 SQUARE

+9, +19, +29, +39 etc

+8, +18, +28, +38 etc

To calculate

$$38 + 49$$

$$38 + 50 = 88$$

$$88 - 1 = 87$$

+ **-**

HS 3

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	39	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

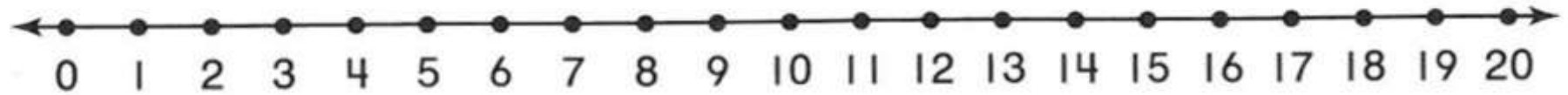
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41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100
101	102	103	104	105	106	107	108	10	110
111	112	113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	128	129	130
131	132	133	134	135	136	137	138	139	140
141	142	143	144	145	146	147	148	149	150
151	152	153	154	155	156	157	158	159	160
161	162	163	164	165	166	167	168	169	170
171	172	173	174	175	176	177	178	179	180
181	182	183	184	185	186	187	188	189	190
191	192	193	194	195	196	197	198	199	200

Resources – Number Lines

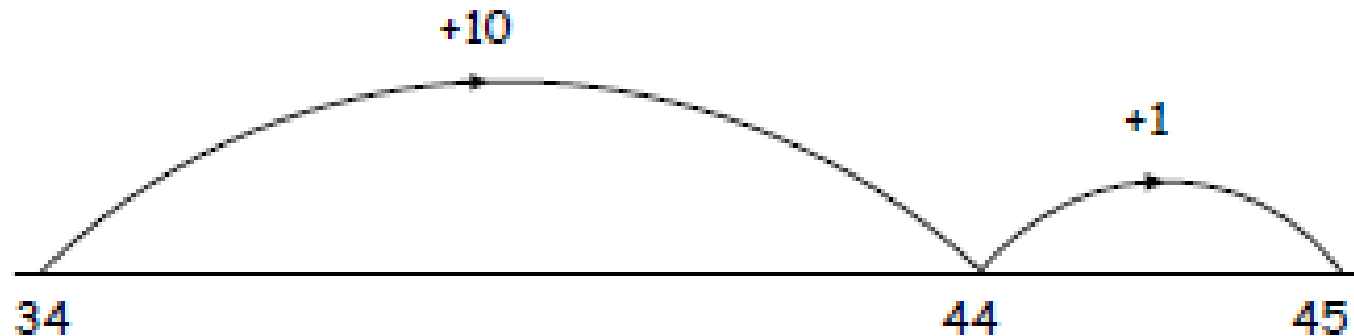
$$4 + 3 =$$



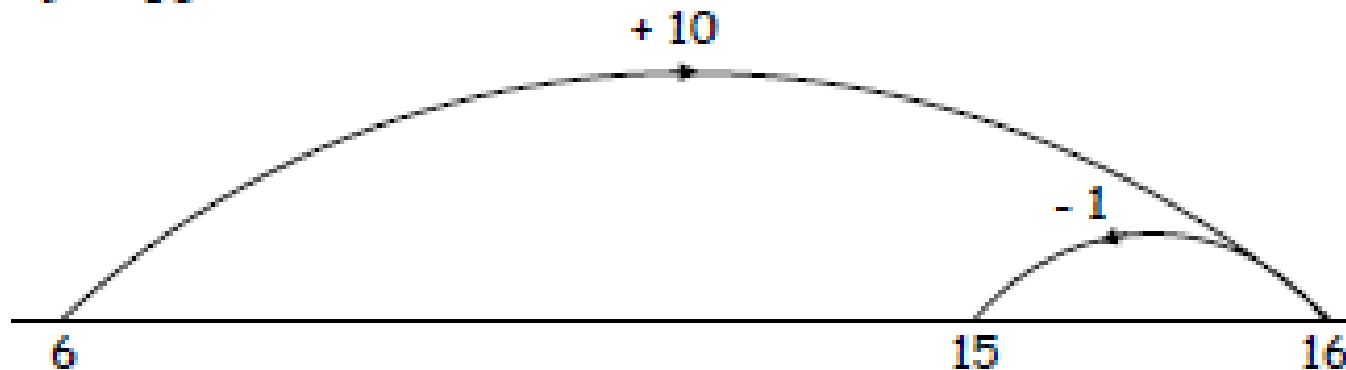
Resources – Number Lines



$$34 + 11 = 45$$



$$6 + 9 = 15$$



Counting, knowing number facts and calculation

$$3 + 7 = 10$$

$$15 \times 9 = 135$$

Using and Applying

Problems, puzzles, investigations

Basic skills and knowledge are vital.

$$7 + 3 = 10$$

$$13 - 5 =$$

Maths in the real world

Knowing which calculation to use

What is one more than 4?

$$4 + 1 = 5$$



What is one less than 7?

$$7 - 1 = 6$$

Talk about it. Use real objects. Use real situations. Count and point to the objects. Begin writing the calculation (symbols).

Maths in the real world

Knowing which calculation to use

A packet of crisps cost 35p. How much change would you get from £1?

$$100\text{p} - 35\text{p} = 65\text{p}$$

Answer: 65p

There are 6 eggs in each box. How many eggs in 4 boxes?

$$6 \text{ eggs} \times 4 = 24 \text{ eggs}$$

Answer: 24 eggs

Sweets cost 5p. How many can you buy for 30p?

$$30 \div 5 = 6$$

Answer 6 sweets

Year 1 / 2 / 3 - Helping at home

- One more / one less
- Counting forwards and backwards



Year 1 / 2 / 3 - Helping at home

How many people are on the bus?

Two more have got on. How many now?

Three people have got off.....



REPETITION

REPETITION

REPETITION

Year 1 / 2 / 3 - Helping at home

You've got 5 and I've got 3.

How many do we have altogether?

How many more do you have?

If you give me one of yours, how many will we each have?



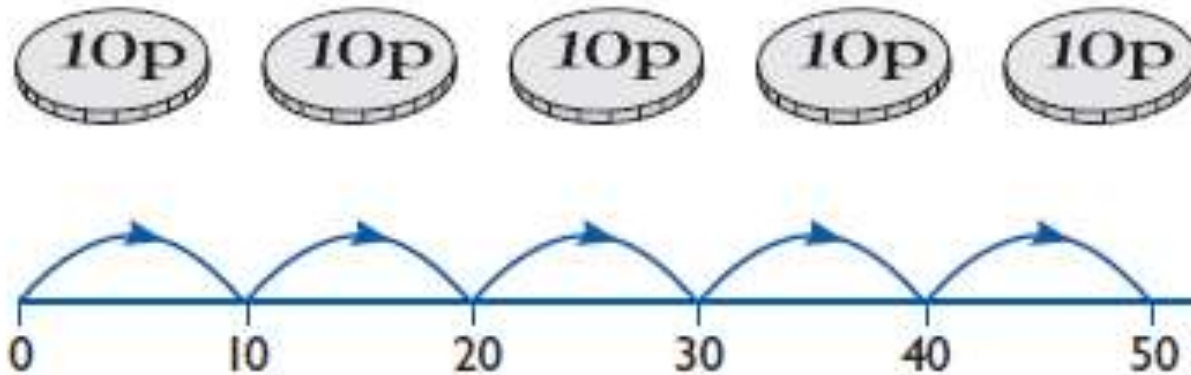
Year 1 / 2 / 3 - Helping at home

- Counting in 2's



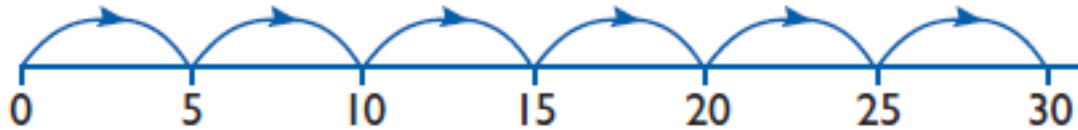
Year 1 / 2 / 3 - Helping at home

- Counting in 10's



Year 1 / 2 / 3 - Helping at home

- Counting in 5's



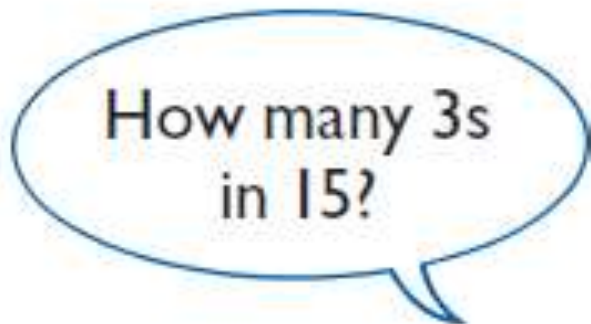
Year 3 / 4 / 5 / 6

- How many more? What's the difference between...? How much change?

- Times tables (and division facts)

Write them out and test each other!

- Calculations: $+$ $-$ \times \div
- Fractions



$$15 \div 3 = 5$$

Maths in the real world

4	118	BRINGTON	12min
3	333	ELEPHANT&CASTLE	13min
3	333	ELEPHANT&CASTLE	14min
1	118	BRINGTON	15min

1	118	BRINGTON	7min
2	333	ELEPHANT&CASTLE	9min
3	333	ELEPHANT&CASTLE	13min
4	118	BRINGTON	16min

www.stockphoto.com - G585PR

Reading the numbers.

Which bus is 3rd?

How many 333's are there?

How long do we have to wait until the first bus?

If we waited for the second bus instead, how much longer would we have to wait?

Shopping

- reading prices
- can you get me two more lemons?
- adding amounts
- finding change
- which is cheapest?
- which is best value?





If you bought 2 bags of clementines, how much would it cost altogether?
If you bought a pineapple, how much change would you get from £1?
If there are 5 clementines in a bag, how much does one clementine cost?
How much more does a bag of oranges cost than a bag of clementines?

Year 2 SATs

1

$6 - 4 =$



1 mark

10

$$84 + 12 = \boxed{}$$



1 mark

23

$$- 12 = 36$$



1 mark

14

$$\frac{1}{2} \text{ of } 14 = \boxed{}$$



1 mark

16

$8 \times 3 =$



1 mark

22

$$80 \div 10 =$$



1 mark

Reasoning

6

Write these numbers in order, starting with the smallest.

73

37

76

36

63

smallest

largest

8

A game costs £25

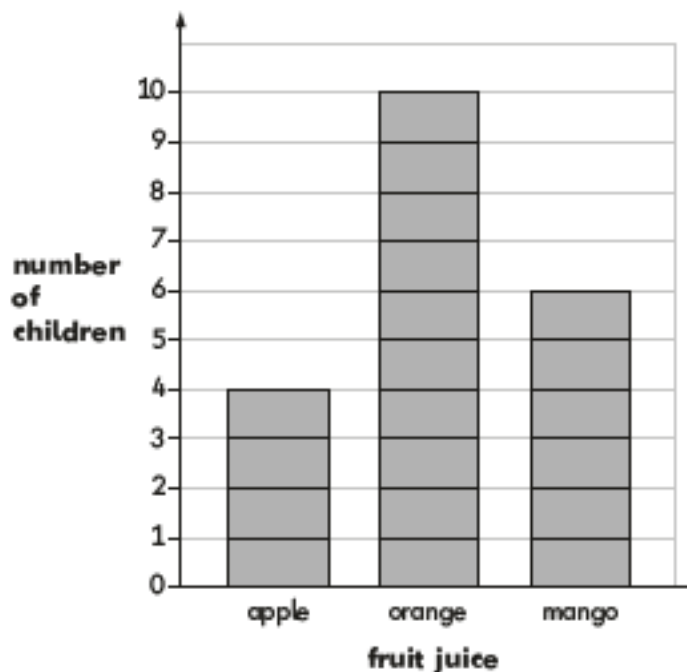
Ben has £19



How much **more** money does Ben need to buy the game?

- 10 20 children choose their favourite fruit juice.

The chart shows the results.



- (a) How many **more** children choose orange than apple?

children

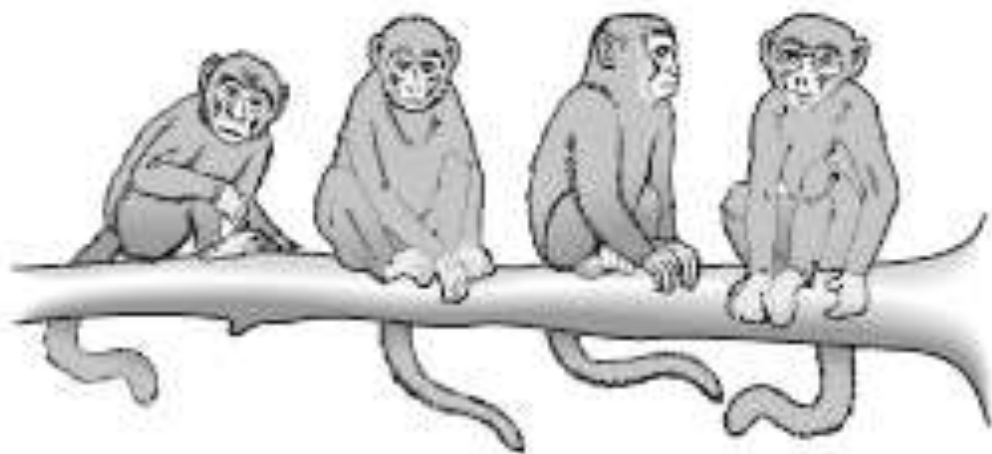
- (b) Another boy joins the group.

He chooses **mango** juice.

Add this information to the chart.

14 20 bananas are shared equally among **4** monkeys.

How many bananas does **each** monkey get?



bananas

16

Look at these coins:



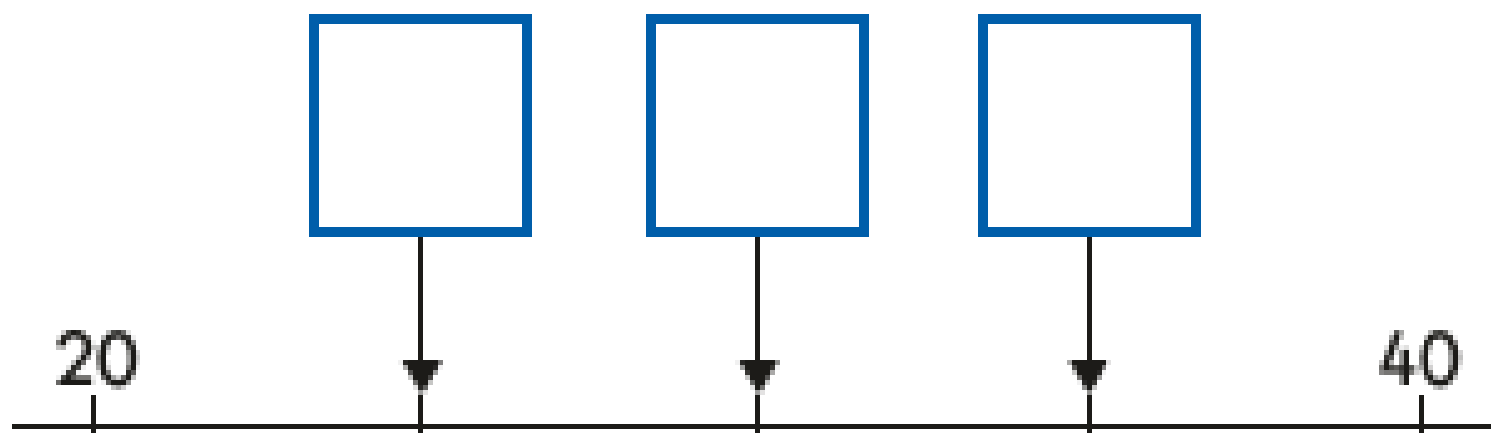
What is the largest amount you can make using **three** of these coins?

p

20

The numbers on this number line go up by the **same amount** each time.

Write the missing numbers in the boxes.



Year 6 SATs

5	<div style="border: 2px solid blue; display: inline-block; width: 100px; height: 40px; vertical-align: middle;"></div> = 936 + 285	<div style="border: 1px solid black; width: 40px; height: 40px; margin: 0 auto;"></div> 1 mark
	<div style="border: 1px solid red; width: 100%; height: 100%; background-image: linear-gradient(to right, red 1px, transparent 1px), linear-gradient(to bottom, red 1px, transparent 1px); background-size: 20px 20px;"></div>	

$125.48 - 72.3 =$

$1,320 \div 12 =$

$\frac{3}{5} \div 3 =$

			7	1
			4	6
×			<hr style="border: 1px solid black;"/>	

$15\% \times 440 =$

$1\frac{4}{5} + \frac{3}{10} =$

Problems

Internet

2016 Key Stage 2 SATs (Year 6)

2 A packet of paper has 170 sheets

4 children each take 8 sheets

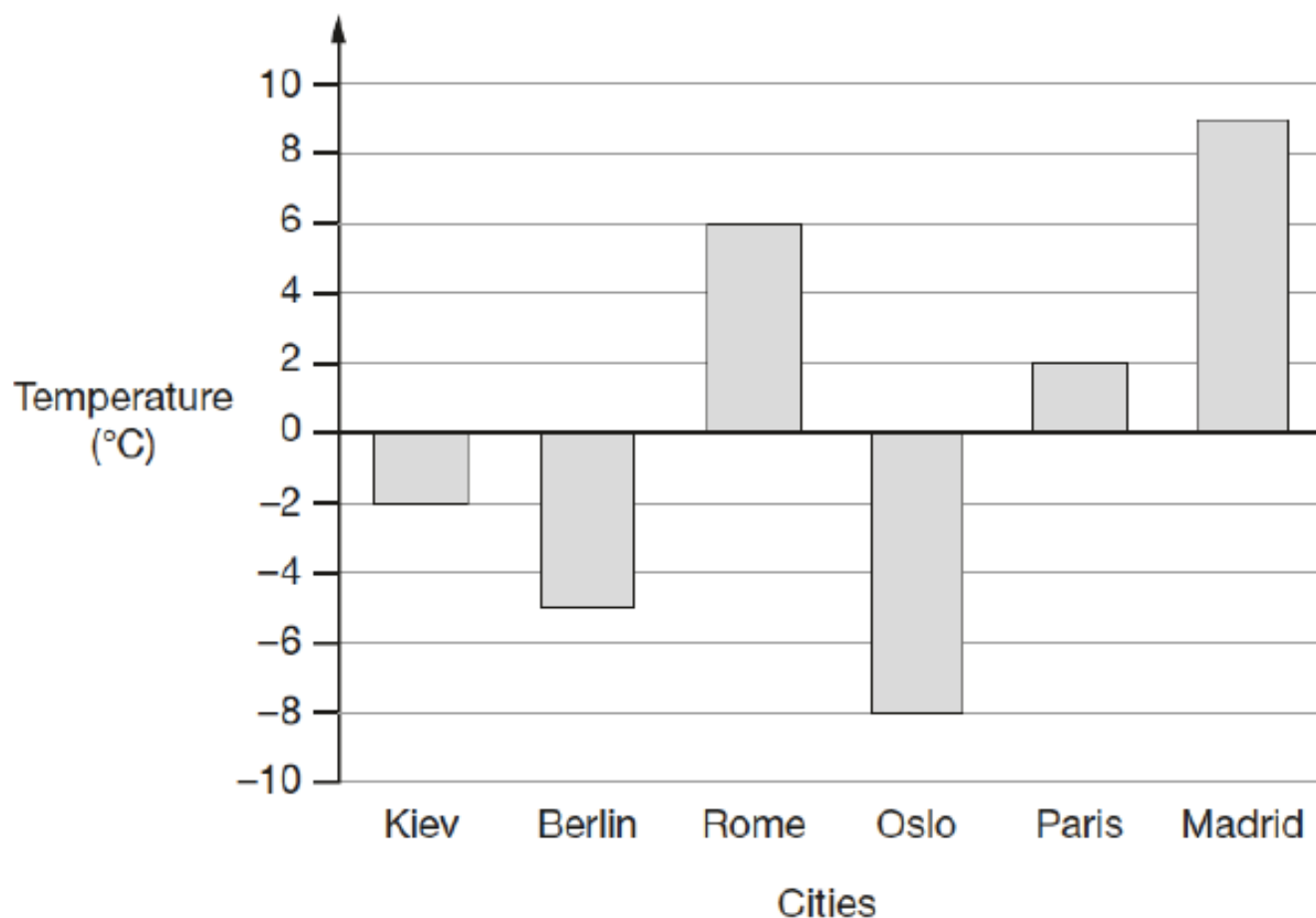
How many sheets of paper are left in the packet?

Show
your
method

The image shows a large rectangular grid with blue lines, intended for a student to show their working. The grid is 20 units wide and 12 units high. In the bottom right corner of this grid, there is a smaller, empty rectangular box with a black border, measuring 6 units wide and 3 units high.

3

This graph shows the temperature in six cities on a day in January.



Which city was 7 degrees **colder** than Paris?

What was the **difference** between the temperature in **Paris** and the temperature in **Madrid**?

10

Write the missing digits to make this long multiplication correct.

$$\begin{array}{r}
 4 \square \\
 \times \square 4 \\
 \hline
 1 7 2 \\
 8 6 0 \\
 \hline
 1 0 3 2
 \end{array}$$

 2 marks

$$7 + \square = 10$$

$$3 \times \square = 150$$

15 Large pizzas cost £9.50 each.

Small pizzas cost £6.55 each.

5 children together buy 2 large pizza and 3 small pizzas.

They share the cost equally.

How much does each child pay?

Show
your
method

£

Using & Applying Mathematics Skills

A Parent's Guide

(Reception)

Recognising numbers

Choose a number for the week, e.g. 2.

Encourage your child to look out for this number all the time.

- ♦ Can your child see the number 2 anywhere?
 - at home
 - in the kitchen
 - on pages in a book
 - in the street
 - on doors
 - on car number plates
 - on buses
 - while out shopping
 - on the shop till
 - on shelves
 - in shop windows
- ♦ Find two apples, toys, spoons, straws, sweets, etc.
- ♦ Make patterns, such as two knives, two forks, two spoons, two knives, two forks, two spoons...
- ♦ Practise writing the number 2.

Choose a different number each week

Dice game

Use a 'dotted' dice and write the numbers 1 to 6 on a sheet of paper (or use the numbered animals).

- ♦ Throw the dice. Can your child guess how many dots there are? Check by counting.
- ♦ Ask your child which number on the paper matches the dots on the dice.



Build a tower

For this game you need a dice and some building blocks or Lego bricks.

- ♦ Take turns.
- ♦ Roll the dice.
- ♦ Collect the number of bricks to build your own tower.
- ♦ The first to 10 wins!

For a change, start with 10 blocks or bricks each. Take away the number on the dice. First to exactly zero wins.

Roll a shape

Cut out 12 shapes.

Make 3 triangles, 3 squares, 3 rectangles and 3 circles.

- ♦ Take turns to roll a dice and collect a shape that has that number of sides, e.g. roll a 4, collect a square.
- ♦ The first to have four different shapes wins.
- ♦ If you can name each shape you go first next time!

Counting and putting numbers in order

Use old magazines, comics or greetings cards.

Cut out pictures of animals, or anything else your child is interested in. Label the animals 1 to 5.



- ♦ Shuffle the animals. Put them in order from 1 to 5.
- ♦ Remove one animal. Ask your child which number is missing. Repeat with other numbers and more than one missing number.
- ♦ Ask your child to say what number comes before or after a number you choose.

When your child can do this, repeat with numbers 1 to 10.

Older children: Extend to 7 times table or decimals.

Reception

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Year 1



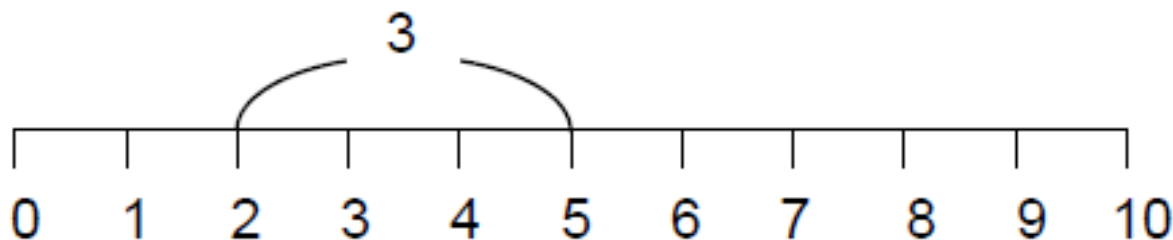
Dice game

You need a 1–6 dice, paper and pencil.

- ◆ Take turns.
- ◆ Choose a number between 1 and 10 and write it down.
- ◆ Throw the dice and say the dice number.
- ◆ Work out the difference between the chosen number and the dice number, e.g. if you wrote down a 2 and the dice shows 5, the difference is 3.

The winner is the person with the biggest difference.

You could also draw a number line to help your child to see the difference between the two numbers.



Year 2



Shopping maths

After you have been shopping, choose 6 different items each costing less than £1. Make a price label for each one, e.g. 39p, 78p. Shuffle the labels. Then ask your child to do one or more of these.

- ◆ Place the labels in order, starting with the lowest.
- ◆ Say which price is an odd number and which is an even number.
- ◆ Add 9p to each price in their head.
- ◆ Take 20p from each price in their head.
- ◆ Say which coins to use to pay exactly for each item.
- ◆ Choose any two of the items, and find their total cost.
- ◆ Work out the change from £1 for each item.

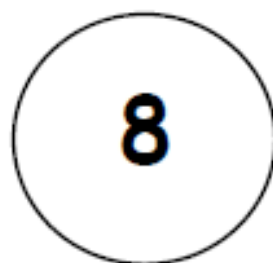
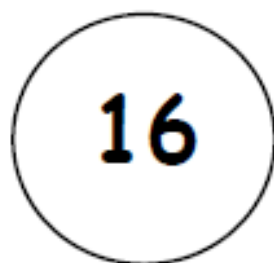
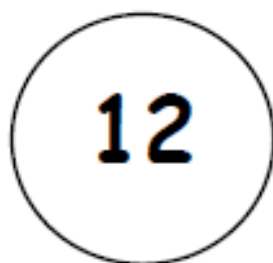
Car numbers

- ◆ Each person chooses a target number, e.g. 15.
- ◆ How many car numbers can you spot with 3 digits adding up to your target number, e.g. K456 XWL.
- ◆ So $4 + 5 + 6 = 15$, bingo!



Circle trios

Draw four circles each on your piece of paper. Write four numbers between 3 and 18, one in each circle.



- ◆ Take turns to roll a dice three times and add the three numbers.
- ◆ If the total is one of the numbers in your circles then you may cross it out.
- ◆ The first to cross out all four circles wins.

Year 3

Can you tell the time?

Whenever possible, ask your child to tell you the time to the nearest 5 minutes. Use a clock with hands as well as a digital watch or clock.

Also ask:

- ◆ What time will it be one hour from now?
- ◆ What time was it one hour ago?

Time your child doing various tasks, e.g.

- ◆ getting ready for school;
- ◆ tidying a bedroom;
- ◆ saying the 5 times, 10 times or 2 times table...

Ask your child to guess in advance how long they think an activity will take. Can they beat their time when they repeat it?



Secret sums

- ◆ Ask your child to say a number, e.g. 43.
- ◆ Secretly do something to it (e.g. add 30). Say the answer, e.g. 73.
- ◆ The child then says another number to you, e.g. 61.
- ◆ Do the same to that number and say the answer.
- ◆ The child has to guess what you are doing to the number each time!
- ◆ Then they can have a turn at secretly adding or subtracting something to each number that you say to them.

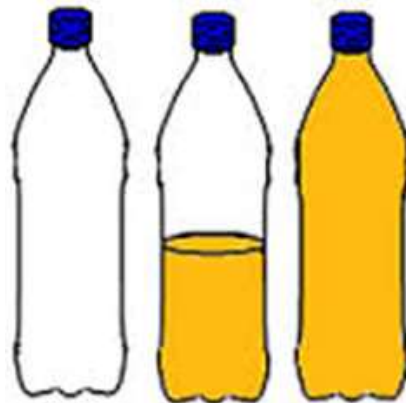
Year 4

Mugs

You need a 1 litre measuring jug and a selection of different mugs, cups or beakers.



- ◆ Choose 2 mugs or any containers.
- ◆ Estimate which holds the most water.
- ◆ Use the measuring jug to measure the capacity of each mug or container.
- ◆ Were you correct?
- ◆ Calculate the difference between the capacity of the containers.



Number game 2

- ◆ Put some dominoes face down.
- ◆ Shuffle them.
- ◆ Each choose a domino.
- ◆ Multiply the two numbers on your domino.
- ◆ Whoever has the biggest answer keeps the two dominoes.
- ◆ The winner is the person with the most dominoes when they have all been used.



Year 6



Recipes

Find a recipe for 4 people and rewrite it for 8 people, e.g.

4 people

125g flour

50g butter

75g sugar

30ml treacle

1 teaspoon ginger

8 people

250g flour

100g butter

150g sugar

60ml treacle

2 teaspoons ginger

Can you rewrite it for 3 people? Or 5 people?

Journeys

Use the chart in the front of a road atlas that tells you the distance between places.

- ◆ Find the nearest place to you.
- ◆ Ask your child to work out how long it would take to travel to some places in England if you travelled at an average of 60 miles per hour, i.e. 1 mile per minute, e.g.

York to Preston: 90 miles 1 hour 30 minutes

York to Dover: 280 miles 4 hours 40 minutes

Encourage your child to count in 60s to work out the answers mentally.



One million pounds

Assume you have £1 000 000 to spend or give away.

Plan with your child what to do with it, down to the last penny.

Summary

- Songs and board games
- Around the home and out and about
- 100 square and number line help yourself!
- Using & Applying Mathematics Skills help yourself!

A Parent's Guide

- Google: “maths year 3” or “Key Stage 2 SATs”
- www.educationcity.co.uk
- <http://mathsathome.lgfl.org.uk/main.html>
- School Website: Parents – Maths
- Be positive and praise effort
- Speak to your class teacher

Questionnaire

Year 6 SATs

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×			<hr style="border: 1px solid black;"/>	

$15\% \times 440 =$

$1\frac{4}{5} + \frac{3}{10} =$

3

Write the three missing digits to make this **addition** correct.

$$\begin{array}{r} 15\Box \\ + 4\Box4 \\ \hline \Box15 \end{array}$$

2 marks

4

This table shows the number of people living in various towns in England.

Town	Population
Bedford	82,448
Carlton	48,493
Dover	34,087
Formby	24,478
Telford	166,640

What is the **total** of the numbers of people living in Formby and in Telford?

What is the **difference** between the numbers of people living in Bedford and in Dover?

5

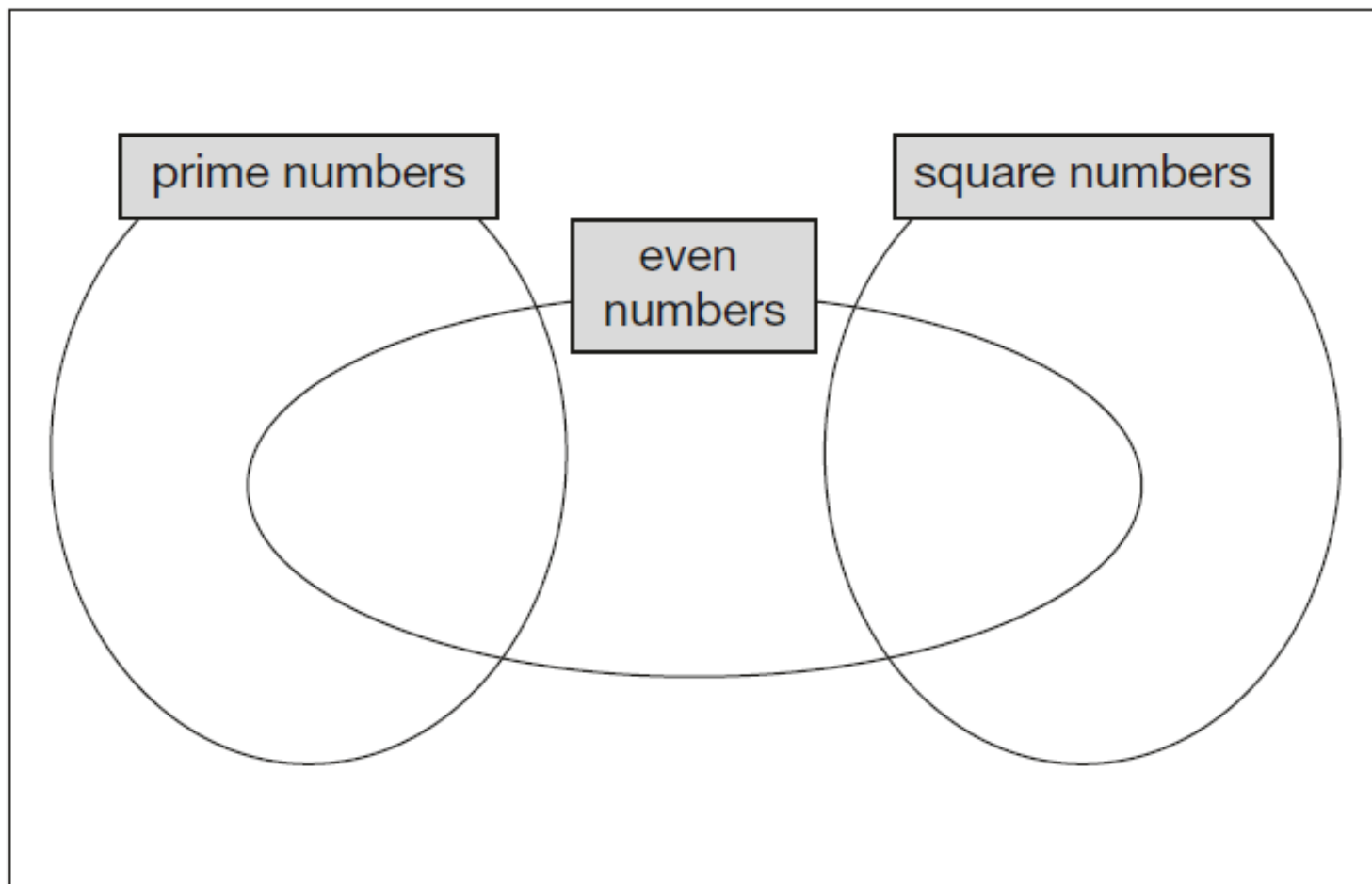
Write each number in its correct place on the diagram.

16

17

18

19



2 marks

7

Write the two missing values to make these equivalent fractions correct.

$$\frac{\boxed{}}{3} = \frac{8}{12} = \frac{4}{\boxed{}}$$

1 mark

1 mark

$$2q + 4 = 100$$

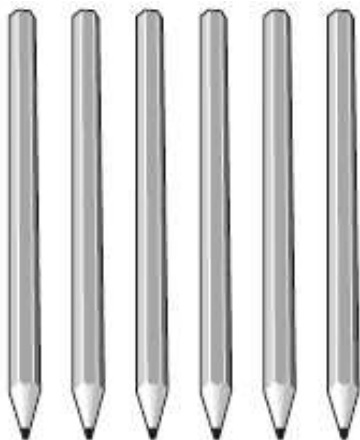
Work out the value of q .

$q =$

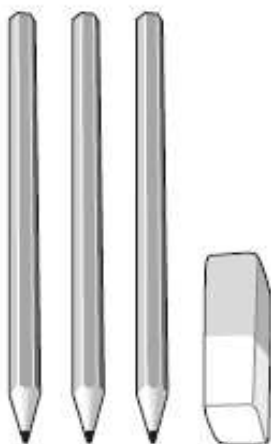
1 mark

9

6 pencils cost **£1.68**



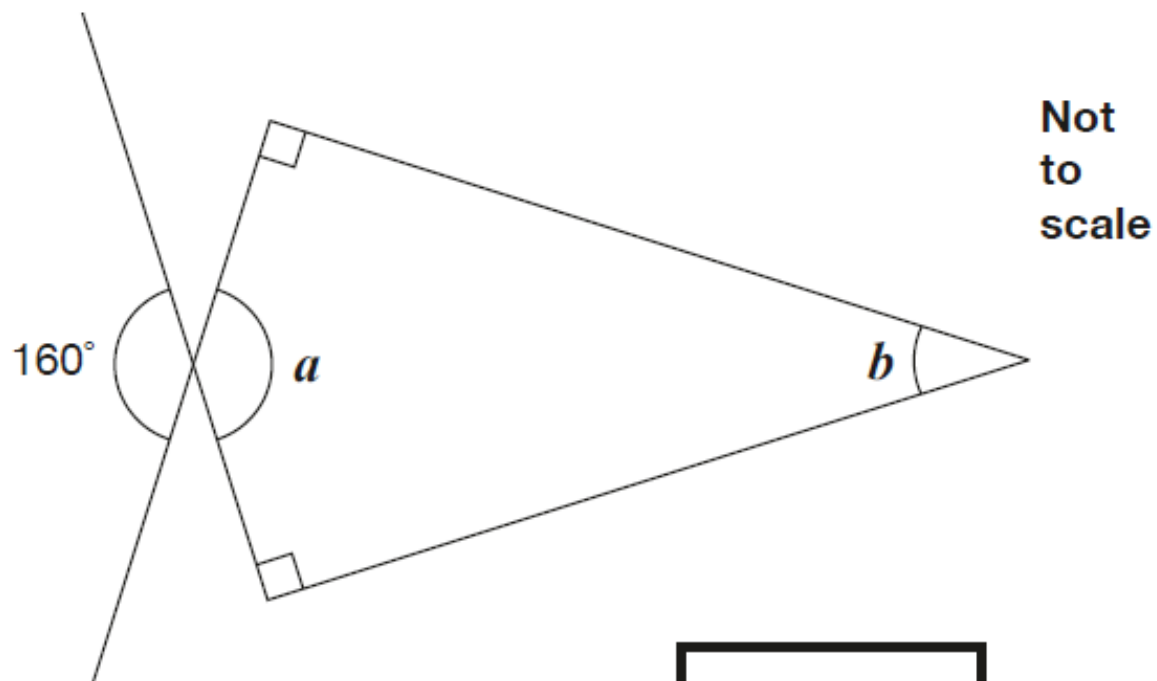
3 pencils and 1 rubber cost **£1.09**



What is the cost of **1 rubber**?

17

Calculate the size of angles a and b in this diagram.

 $a =$

1 mark $b =$

1 mark

Year 5

$$\begin{array}{r} 21848 \\ + 1523 \\ \hline 23371 \\ \hline \end{array}$$

$$\begin{array}{r} 154.75 \\ + 233.82 \\ \hline 388.57 \\ \hline \end{array}$$

Year 6

$$13.5 + 6.94$$

✗

$$\begin{array}{r} 13.5 \\ + 6.94 \\ \hline \end{array}$$

✓

$$\begin{array}{r} 13.5 \\ + 6.94 \\ \hline 20.44 \\ \hline \end{array}$$