Name   Date
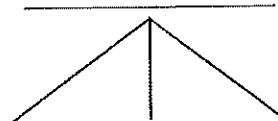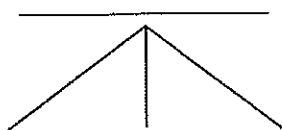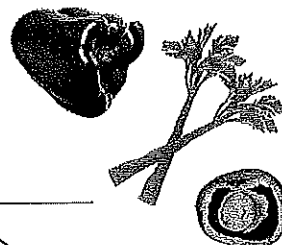
Handy trees

Use tree diagrams to solve the following.

1   Henry's Pizza Pantry sells pizzas with a variety of toppings, if you like vegetables!
    The menu includes red peppers, mushrooms and celery for extra healthy pizzas.
    You can have cheese with one vegetable or cheese and ham with one vegetable.

What are the different pizzas that Henry makes?

_____

_____

_____

2   The scouts have lots of fund raising jobs to do.

    The biggest job for everybody will be a massive weeding of the gardens.

    After that, there is sweeping, mowing and digging to be done.

    Finally the groups will have to divide into 6 to do planting, staking,

    watering, mulching, trimming and carting away rubbish.

    There is mass confusion at first, but the scout leader brings order by drawing a tree diagram.

    What would each person do for each job? Write the jobs on the branches of the trees.
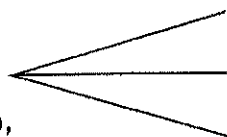
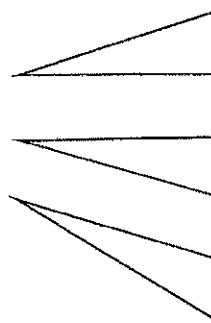| First Job	Second Job	Third Job

Jeb, Jody, Ken, Kip,
Trent, Monti

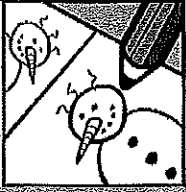*Name*

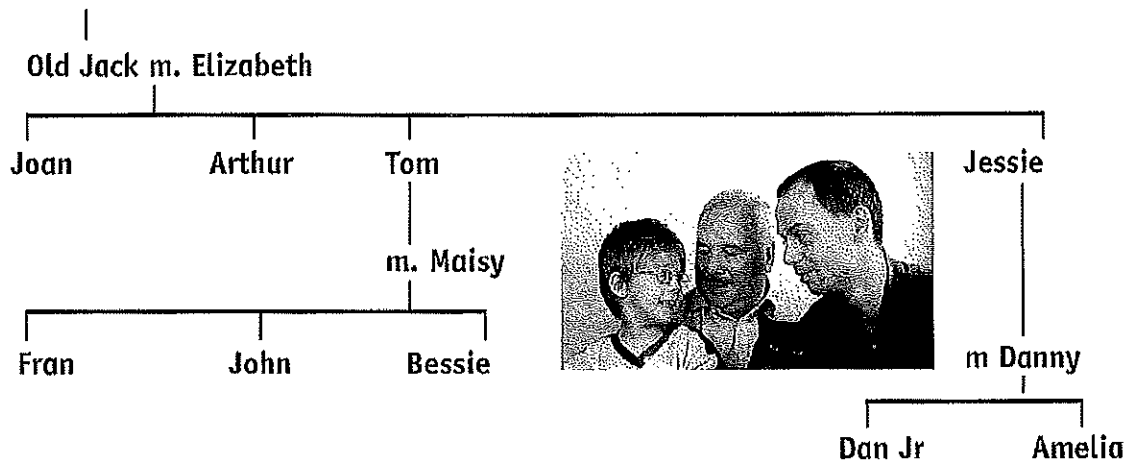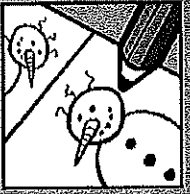*Date*

Family tree

A family tree shows a family's relationships and numbers of family members in each generation. It has branches like an upside down tree.

1 Old Jack had a wife, Elizabeth, and 4 children. Two of his 4 children married; the other two, Joan and Arthur, remained single. Tom and his wife Maisy, had 3 children, Fran, John and Bessie, while Jessie and her husband Danny, had 2 children, Dan Jr and Amelia. How many people came to their Christmas dinner (when the whole family always met)? _____

Circle all of the youngest generation on this family tree.

Old Jack m. Elizabeth

| Joan | Arthur | Tom | | Jessie |

m. Maisy

| Fran | John | Bessie |

m Danny

| Dan Jr | Amelia |

2 The first settlers to arrive at Worthington were Martin and his wife Myrtle. Their children were Stanley, Gregory and Maude. Stanley's wife was Vivienne and they had 3 children, Harry, Stan Jr and Felicity. Gregory remained single. Maude married Peter and their children were Zachary, Joseph and Larry. Draw the family tree to show the three generations of this family.

Name   Date

Lines of history

**1 a** Place the following important events on the timeline of part of Eva's life.

At 1 year of age, her first tooth appeared. At $2\frac{1}{2}$ years, she attended nursery school. When she was 4, she went to preschool, before beginning school at 5 years. The day she turned 6, her Dad bought her a bike and when she was $7\frac{1}{2}$ she broke her arm. On her 9th birthday, she had a sleepover with friends for the first time. At 11 she entered Year 6. At the end of that year she graduated to secondary school.

```
I    I    I    I    I    I    I    I    I    I    I    I    I
0         2         4         6         8         10        12
```
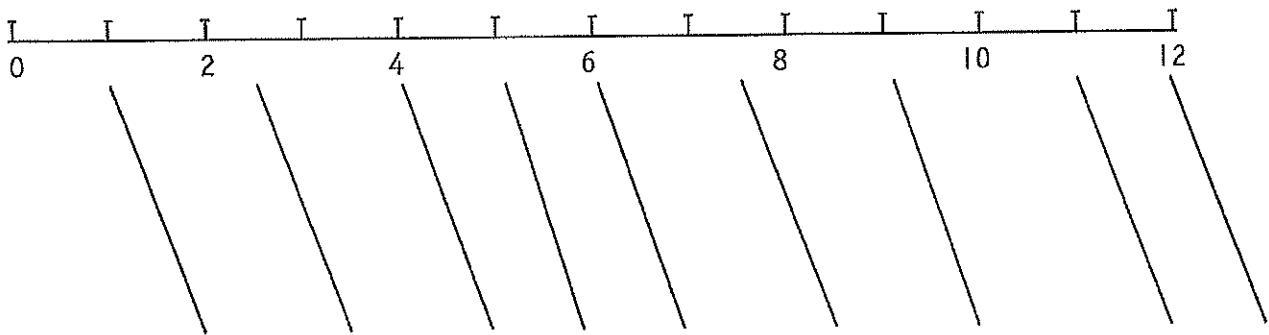
b There were more important events in Eva's life before she began school than after.
true/false _____

2 a Draw a timeline to plan out the year on Grant's Dairy. Divide it into 12 months.

In June, 12 new calves were born while in May, 3 cows had been sold. Also in May, there had been a blockage in the water pipes to the cows' feeding yard. At the beginning of spring, another 12 cows had calves and in October, 5 new cows were bought for the herd. In February, a new dairy worker had to be trained and then in November another one had to be trained. During March the hay was cut for winter feed.
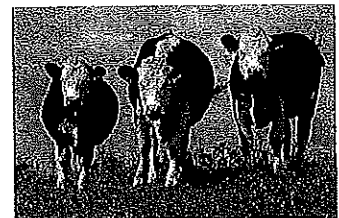
b The busiest season of the year was spring. true/false _____
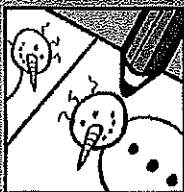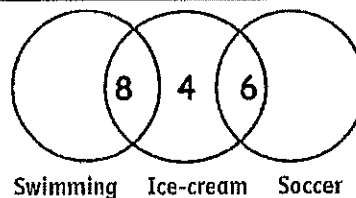
Name

Date

Let's sort it out

Use Venn diagrams to help organise data into groups.

Example

8 children went swimming, then had ice-cream.

6 played soccer then had ice-cream.

4 children had only ice-cream.

8   4   6

Swimming   Ice-cream   Soccer

1 Put the shapes in the correct sections to show their properties.

square, circle, rectangle, ellipse, cube, hexagon, pyramid, octagon, triangle, cylinder, cone
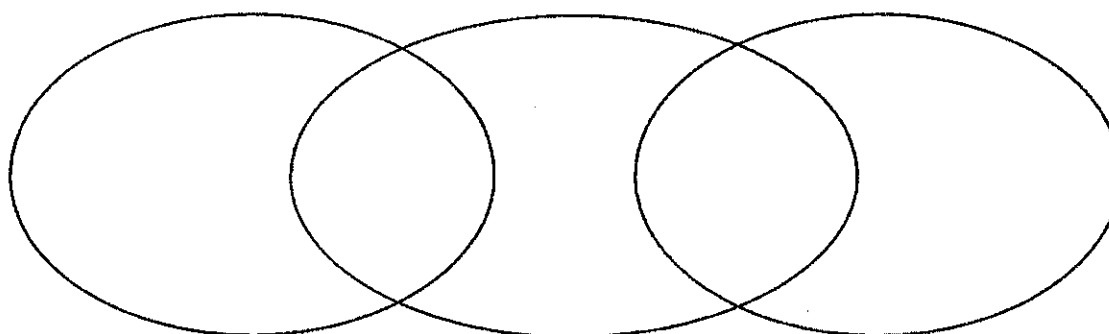
Polygons   **3D shapes**   **Curved shapes**

2 If the following numbers were making teams, they'd line up in these ways:

Prime numbers, Triangular numbers, Multiples of 7.

a Put these numbers in their correct teams. 3, 10, 11, 14, 15, 19, 28, 35

b Which numbers are members of more than one team? _____

Prime numbers here!   **We are triangular numbers.**   **Multiples of 7 over here!**

Name   Date

Sorting using diagrams

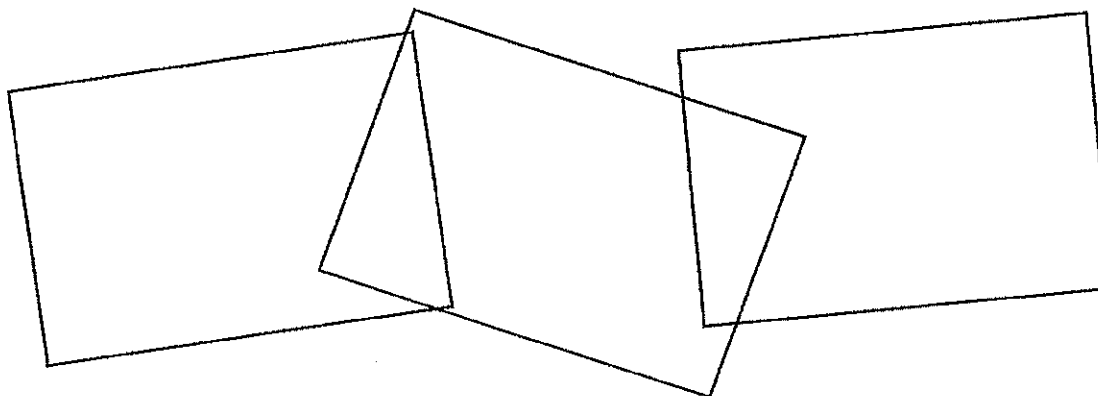1 At the Finer Fitness Club, 22 members were in the Weight Loss Plan and 24 were in the Flexibility Plan. 8 members were in the Flexibility Plan as well as the Water Fit Program. 6 were in the Weight Loss Plan as well as in the Water Fit Program. The Weight Loss, Flexibility and Water Fit Programs each had 16 people who were in no other Plan or Program. How many people were in the whole club?

Weight Loss   **Water Fit**   **Flexibility**
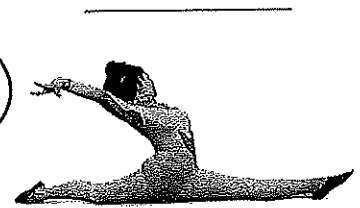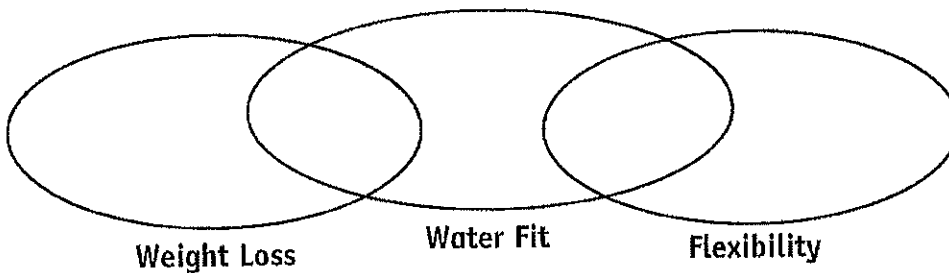
2 When the Get-It-Done-Girls took off for their Camp during the summer, they were excited about the new activities they would try. 6 would try horse riding, 8 would try canoeing and 6 would try cooking, all for the first time. In the whole group, 9 girls were doing an activity a second time; 4 had done horse riding before, 3 had done cooking and 2 had done canoeing. How many girls are in the whole group?

Horse riding   **Cooking**

Canoeing
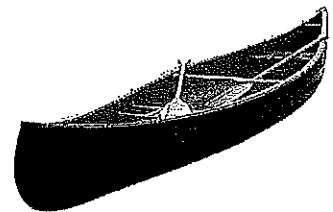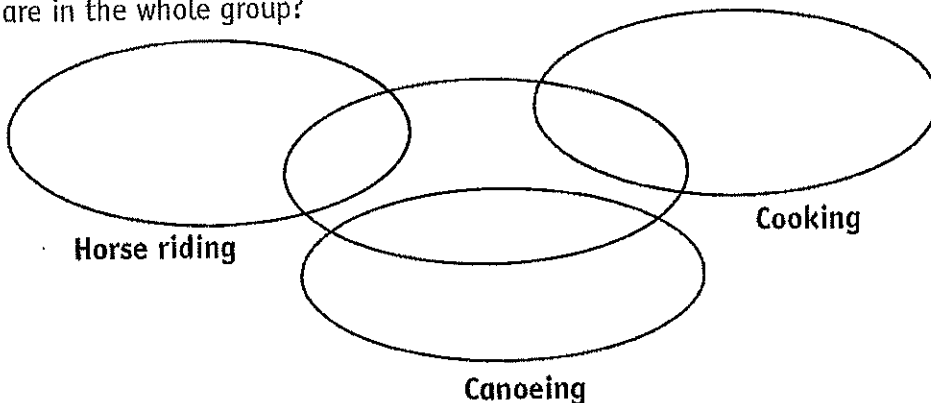
3 a Put the following numbers in their correct areas — those divisible by 5 in the triangle; those divisible by 6 in the ellipse; those divisible by 4 in the rectangle.

5, 15, 18, 24, 28, 30, 32, 40, 54, 75

b Which numbers are divisible by 5 and 6? _____

c Which numbers are divisible by 4 and 6? _____

Name

Date

Jolly Jetsons' joy

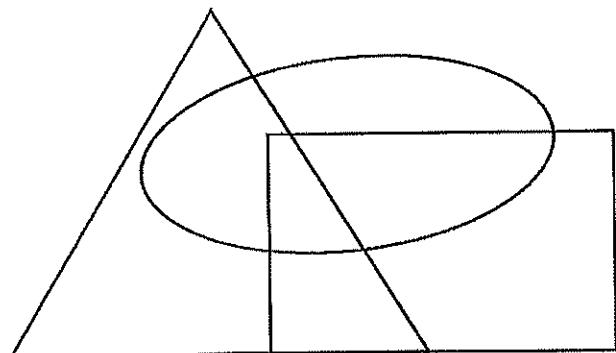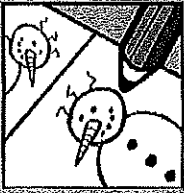**1 a** It rained most of the weekend when the Jetsons went on holiday. Three-quarters of the rain fell on Saturday. Colour this fraction blue. Half of that fell on Saturday morning. Draw black lines over this fraction.

  b More rain fell on Saturday morning than during the rest of the weekend. true/false _____

2 a Grandpa Jetson gave one-half of his money to his children. Colour this section red. He then gave one-quarter of what was left to his grandchildren. Colour this blue. Half of the rest went to a charity. Colour this yellow.

  b Grandpa gave the smallest amount to his grandchildren. true/false _____

3 a The Jetsons spent four-fifths of their money on accommodation. One-quarter of this was for parents' rooms, and one-third of the remaining accommodation money was for children's rooms. Colour this on the diagram.

  b The parents' rooms cost more than the children's rooms. true/false _____

4 a A birthday cake for Jimbo Jetson was cut in half. One half was cut into 8 for the Little Jetsons, while the other half was cut into 6 for the Big Jetsons. 2 pieces of the Little Jetsons' cake were left and 2 pieces of the Big Jetsons' cake were left. Colour the diagram to show this.

  b The Big Jetsons left more cake than the Little Jetsons. true/false _____

Worksheet 8
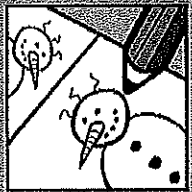
Name   *Date*

There's a fraction too much friction

Draw diagrams for each question.

1 Four children each had two-thirds of an orange at half time in the tennis game and there were four-thirds of orange left.

How many oranges were there to start? _____
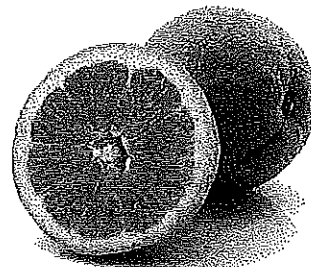
2 From two and a half metres of ribbon we cut eight pieces, each one-fifth of a metre in length.

How much ribbon is left? _____

3 At the District Show I intend to spend one-quarter of my money on food, three-eighths of my money on Show Bags and I hope to still have three-eighths of my money for rides.

If I want £45 for rides, how much money will I need to start with? _____
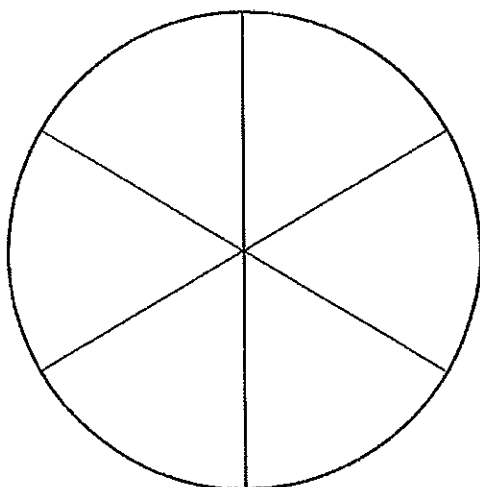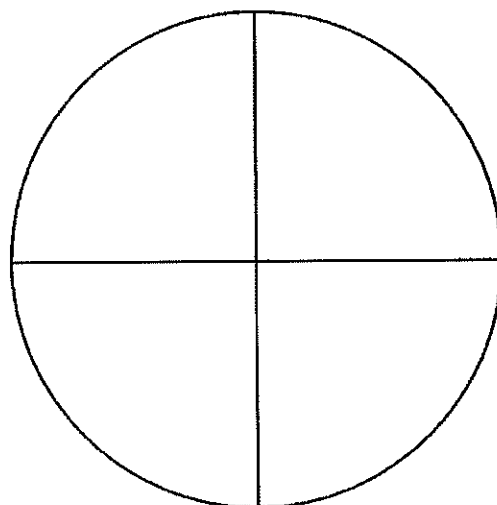
4 In the village of Gophourit, most children spend one-third of the day sleeping, one-quarter of the day at school and just one-twelfth eating. How much time is left for other activities?

_____

Name

Date

Train your eye

Which design on the right is the *mirror image* of the one on the left?

1 ○ ○ □ ▭ ▭ | mirror |

a ○ ○ □ ▭ ▭
b ▭ ▭ □ ○ ○
c ○ ○ ▭ □ ▭

2 ✕ ○ ✕ ✕ ○ △ △ ○ | mirror |

a ○ △ △ ○ ✕ ○ ✕
b ✕ ○ ✕ ✕ ○ △ △ ○
c ○ △ △ ○ ✕ ✕ ○

3 | mirror | △ △ ○ ▽ ▽ ▽ ◊ △ ▽

a △ ▽ ○ △ △ ◊ ▽ △
b ▽ △ ◊ ▽ ▽ ○ △ △
c △ △ ○ ▽ ▽ ▽ ◊ △ ▽

4 | mirror | ⬠ ⬠ ⬡ ◸ ◹ ◸ ◺ △

a ⬠ ⬠ ⬡ ◺ ◺ ◸ △ ▽
b △ ◹ ◺ ◺ ◸ ⬡ ⬠ ⬠
c ▽ ◹ ◸ ◺ ◺ ⬡ ⬠ ⬠
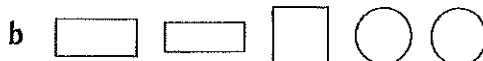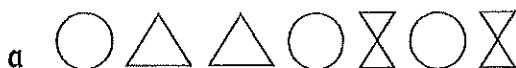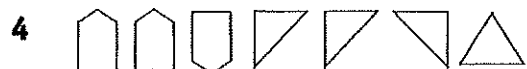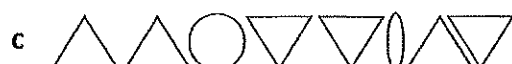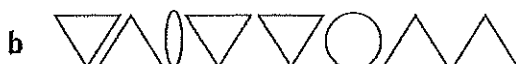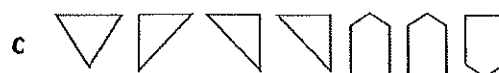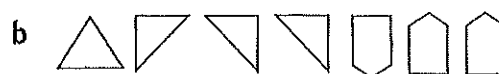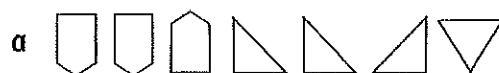
5 Draw the mirror image.

y   y   z   ∑   q   d   s   s

| mirror |

Name   *Date*

Sequences

A set of numbers following a pattern is called a *sequence*.

We can make a sequence beginning and ending anywhere.

1 Make a sequence of 8 numbers according to each given rule.

   a multiples of three; starting from 3 _____

   b divide by 10; starting from 14 000 _____

   c add 1, multiply by 2; starting from 3 _____

   d one less than double the number; starting from 4 _____

   e the sum of the preceding two numbers; starting from 2, 3 _____

2 Write the sequence of days of the week containing the letter 's'.

   _____

3 Write the sequence of months of the year containing the letter 'r'.

   _____

4 Write the sequence of prime numbers less than 40.

   _____

5 Write the sequence of composite numbers between 25 and 40.

   _____

6 Write the sequence of numbers divisible by 4 which are < 30 but >10.

   _____

7 Write the sequence of odd numbers which are prime and also less than 10.

   _____

8 Write the sequence of numbers which grows by 5, beginning with 22 and ending with 57.

   _____

9 How many numbers are in the sequence of multiples of 3 between 40 and 50? _____

10 How many numbers are in the sequence of square numbers less than 50? _____
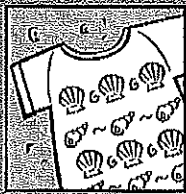
Name		Date

Numbers hiding

1 What numbers are hidden under the squares marked with an X?

a

1				X					28
	X	37							
							X		

b

1			17						37
		X					X		
			X						

c

									X
				X				32.5	
		X							16
14.5		X							1

2 Complete the magic squares.

a

8	1	
3		
4		2

b

2		6
	5	
4		8

3 Write each rule. Then fill in the blank spaces.

a

Input	Output
1	5
2	8
3	
	14
	17
7	

b

Input	Output
1	1
2	5
3	9
4	13
	21
8	
	37

c

Input	Output
1	2
4	17
6	37
7	
	65
15	
	401

Worksheet 4

Name

Date

Olympic champs

The competitors are trying everything to bring home even more medals than they won last Olympics. See how much they are training to be fitter and faster!

1 The rowers trained for the 500 m Eights and think that they can improve by taking fewer strokes every time they do the 500 m. If they can cut one extra stroke from their count every week, in what week will they be doing less than 40 strokes? _____

Week	1	2	3	4	5	6	7
Strokes	52	51					

2 Mack MacMaster was very clever at getting Frannie Fisch to improve her swim times a little each week. The following table shows how her best times progressed in a pattern. Complete the table to show her time in Week 8.

Week	1	2	3	4	5	6	7	8	9
Time	45·2s	42s	40·4s	39·6s					38·825s

3 Andie Artache wished to gain weight for his wrestling competition. The following chart shows his weight gains during the months leading up to the competition. Follow the pattern to complete the table.

Date	Mar 7	Mar 21	Apr 7	Apr 21	May 7	May 21	Jun 7	Jun 21
Weight	84 kg	90 kg	95 kg	99 kg				

4 Every 4 days, Hubie Huggers needs to improve the distance he runs in 55 sec by 0·5 metres more than he improved in the previous 4 days. On Mar 3 he can run 400 m and on Mar 7 he can run 400·5 m.

a Complete the table.

b How far will he run in 55 seconds at the end of March? _____

Date	Mar 3							
Distance	400 m							

Name

Date

Number plates

I Write the number plates that were made between the following:

a ABC 994 _____ ABD 001

_____

b DJ 95 AA _____ DJ 00 AB

_____

c AY 9989 _____

_____ AZ 0002

d TZ 997 _____ UA 003

e 36 JJ 49 _____ 36 JP 49

2 In the town of Nockley, house numbers have an unusual way of progressing. Starting at A0 in the East or South on one side of the road, and A1 on the other, they progress by two before changing the initial letter. So A8 would be next door to B0, and A9 would be next door to B1 on the other side of the road.

What are the house numbers on either side of the following?

a _____ D8 _____   **b** _____ R0 _____

c _____ S1 _____   **d** _____ J4 _____

e _____ X2 _____   **f** _____ Y9 _____

3 Write the rule for progressing each of these series.

a 45, 56, 68, 81, ...   Rule: _____

b 3, 8, 15, 24, 35,...   Rule: _____

c 1, 8, 27, 64, ...   Rule: _____

Name

Date

Series with rules

1 The Council of Moggy has to employ more cats to carry out big projects in the new year. They decide to double the number of workers plus one extra each week. Complete this table to show how many cats are employed each week in total.

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
1	3	7							

2 The Moggy workers are not very honest cats, and their tools keep disappearing. In week 1, there were 54 tools. In week 2, ten tools were lost. But each week, one less tool is lost. Complete the table to show when they will have no tools left at all.

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10

3 Because of the lost tools, the working cats of Moggy are paid a little less each week. Study this table and decide how their boss works out how to pay them.

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
£285	£280	£276	£271	£267	£262	£258	£253	£249	£244

The cats would be paid _____

_____

4 Each day, the cats are arranged in teams which number between 3 and 8. Study the table in Question 1 and complete this table. Discuss the patterns formed.

	W1	W2	W3	W4	W5	W6	W7	W8
a number left out when in teams of 3								
b number left out when in teams of 4								
c number left out when in teams of 5								
d number left out when in teams of 6								
e number left out when in teams of 7								
f number left out when in teams of 8								

Name

Date

Paying for credit

1 Paying off a credit card is a difficult but wise thing to do. Jeremy paid off an initial £100 in May, and then each month wanted to pay £50 more than the month before.

Complete the table. Be careful – all the months are not consecutive!

Month	May	June	Jul	Aug	Sept	Oct	Dec	Mar
Total Amt Paid	£100							

2 Jenny pays her credit card off differently. She owes £4 750.
Her rule is to pay £50 in May then double the payment each month.

a Complete the table to help her keep a record of her expected balance each month.

b When will her balance be nil? _____

Month	May	June	Jul	Aug	Sept	Oct	Nov	Dec
Balance								

3 Poppie's credit card has interest added every month. She vows to pay £100 each month. Although she pays this amount, and it is taken from the total, every month £5 interest is being added.

a With an initial balance of £1 500, what will be her balance after 8 months?

_____

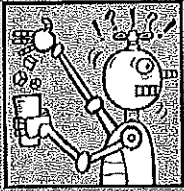| Month	May	June	Jul	Aug	Sept	Oct	Dec	Mar
Balance								

b How much will Poppie still have to pay after 15 months of paying her bill?

_____

4 Toni bought a car on credit. The car cost £7 800 and interest payments of £42 are added each month. He wants to pay it off in 12 months. How much will his monthly payments be?

_____

Name   *Date*

My favourite numbers

Write a number sentence for each problem. Use inverse operations to find the answer.

Example | If you add 10 to my favourite number you have a number that is the square of half a dozen.

Number sentence: ▲ + 10 = 6 x 6   Take 10 away (inverse operation) from 36

(▲ = 6 x 6 – 10), to arrive at the favourite number, 26.

1 If you take my favourite number, multiply it by the sum of 7 and 9, and take away 14 you arrive at the answer of 18.

Number sentences _____   _____

(**Solution**)

2 After you have divided my number by 9, added 14 and multiplied by 3, you will end up with 66.

Number sentences _____   _____

(**Solution**)

3 If you halve my number, square the answer and subtract the difference between 70 and 36, you will arrive at a number equivalent to 11 times 6.

Number sentences _____   _____

(**Solution**)

4 If you double my number and add 4 you arrive at a total that is 7 times 3 less than the square of 11.

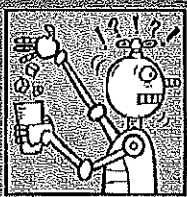Number sentences _____   _____

(**Solution**)

Challenge

5 When you triple my number, add the multiple of 4 and 5 and take away the prime number before 40, you end with 2 less than 5 dozen.

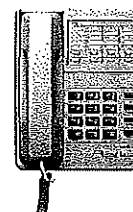Number sentences _____   _____

(**Solution**)

Name

Date

Money in the bank

1 I can't remember how much I had in my purse before I was paid £500 for work.

Then I paid the phone bill of £150. I also paid the rent of £820 and still had £130

left. How much was in my purse at the beginning? _____

2 My bank balance has been erased from the statement. I can see that I paid £280 for car repairs and received £320 from my brother's business. After that, I had two amounts of £60 paid into my account before I paid £750 to the insurance company. There are now £60 in my bank.

What was my bank balance at the beginning? _____

3 My school raised a large amount to send to the Klever Kids Charity. We receive a large donation of £700 more. We have to pay £200 for the advertising and £350 for the rental of the Funny Castle used in the fundraising. With £50 more, we will reach our goal of £1 500.

How much did we raise in the first place? _____
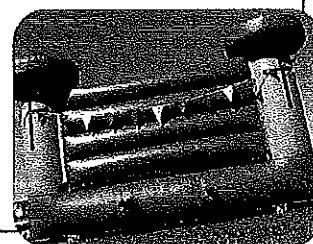
Challenge ···

4 Grandpa gave Jock one note with which to pay for his day at the beach. His little sister gave him £5.50 for his train fare, but it only cost him £3.30. He spent £7.20 for lunch and then had £5 left to share with his friends.

How much did he get from Grandpa? _____

Worksheet 4
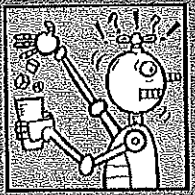
Name *Date*

Shopping spree

Meena, Anthony and Alexander are shopping for the holidays. They love talking in riddles, however, so it is very hard to tell exactly what they spent!

1 Meena bought a top, a skirt, a belt and some sandals. The top was £20 less than the sandals, while the skirt cost £6 more than that. The belt was a bargain at £20 less than the skirt.

If the sandals cost £49, how much did Meena spend on each item and in total?
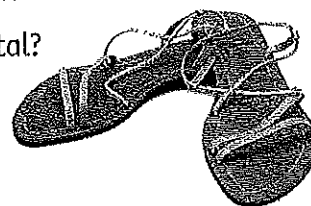
Top _____ Skirt _____ Belt _____ Sandals _____ Total _____

2 Anthony wanted to be outfitted correctly for the new Soccer season. He went to buy boots, shorts, shirt and socks. His shorts were £10 less than the shirt, which was £20 less than the boots. His socks cost the least, a full £19 less than his shorts.

If his boots were £65, how much was each item and what was the total spent?

Shirt _____ Shorts _____ Socks _____ Boots _____ Total _____

3 Alexander went to his ATM and drew out a large amount of money for his expenses. For Christmas presents for his family, he spent £15 more on books than on CDs, which cost £15 more than toys. Cards were one-fifth the cost of toys and one-third the cost of calendars, which were £36. Alexander now had £27 left.

How much did he get from the ATM? _____
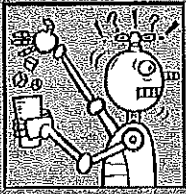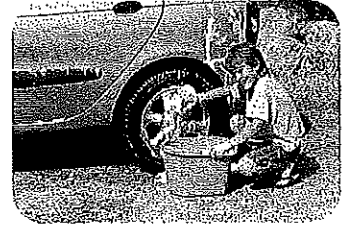
Name   *Date*

Fearless with fractions

Calculate what fraction remains, then give it a value.

1 a At the Car Wash fundraising last Saturday, The Angels Team washed $\frac{1}{2}$ the total cars, The Bizzies Team washed $\frac{1}{4}$ of the total and The Friskys Team washed the last 10 cars.

How many cars did The Angels Team and The Bizzies Team each wash?

_____

b Draw a diagram illustrating the fractional parts and numbers of cars to check your solution.

2 a When the house had to be painted, the Manoogle family invited their uncles to help out. Uncle Val painted for $\frac{1}{3}$ the total number of hours needed for the whole job, Uncle Joe painted $\frac{1}{4}$ of the total hours and Old Uncle Freddie managed $\frac{1}{6}$ of the hours. There were 15 hours of work left for Uncle Ted to complete the job.
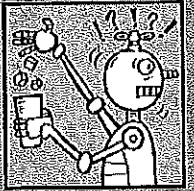
How many hours did each Uncle work? _____

b Draw a diagram to show your solution.

3 In the Chompy Chocolate Sale at their school, Class 5J sold 20%, 5S sold 30%, 6K sold 25%, and 10% was sold by 6C. The rest were sold by 6M for £450.

How much money did 5J and 5S each make? _____

Worksheet 6

Name

Date

Dart games

As you read the problem, write down the working in the form of a number sentence, using a symbol for the unknown number at the beginning.

1 The big, final darts game got under way right on time. Jack threw and amazingly scored an all-time best, beating his old best-ever score by 3. Then Jock stepped up and beat that score by 5. Jack was angry and, with a grim look on his face, bettered Jock's score by another 5 points. Jock didn't like that, so he chose his favourite, true-flying dart and with it, scored 99, 2 better than Jack's previous throw. It was all over!

_____
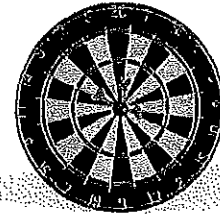
Now work backwards, changing signs. _____

By how many had Jock beaten Jack's original 'best-ever score'? _____

2 The Ladies' Darts Game followed the Men's. Florrie sent the first dart flying and scored her best ever by 2 points, but Connie responded with a score 2 better than that. Florrie then scored, beating Connie's by a huge 4 points but Connie came back with a throw 1 better again. Florrie's last throw of 90 failed to beat Connie's by 1, so Connie retained the championship.

_____
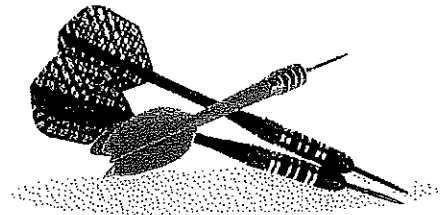
Now work backwards, changing signs. _____

What was Florrie's best ever score before this Championship? _____

Challenge ....

3 Connie and Jock, the Voombahs, combined to contest the Club Championship with the Jetskis team. The Voombahs began with an outstanding score, 2 better than their previous record. They then bettered that by 3 points, dropped back by 2 points, and finally finished with a score one better. The Jetskis began their turn with a good throw, bettered it by 2, then another 3 and improved by 2 to end with an 87, 6 better than the Voombahs opening throw.

a What were the final total scores? _____

b What were each team's final throws? _____
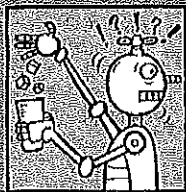
Name   Date

For intrepid travellers

1 Mr Mystar planned a very big holiday to celebrate his business success. He Googled air fares for different destinations. Wellington was the cheapest, half the cost of the fare to Shanghai. Hong Kong was £500 less than Shanghai, which was £500 less than Paris, which was £100 more than Tokyo, which was £50 less than London. The fare to London would cost him £2 200.

He eventually decided to book a trip to Shanghai this month and Wellington next month.

a What will each fare cost him? _____
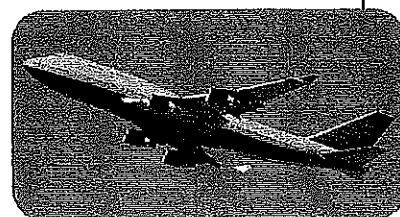
b Draw a 'money line' to illustrate your solution. What scale will you use? _____

2 On his Shanghai trip, Mr Mystar decided to backpack along an historic highway to the Great Temple. He begins on a Thursday by travelling 2 hours more than Friday and Saturday combined because of hold-ups along the way. Sunday's travelling time is shorter, 1 hour less than Friday and Saturday combined. On Monday he travels 2 hours more than on Sunday, and on Tuesday the travelling time of 8 hours is equal to Monday's.

a How many hours has he travelled in total? _____

b If he averages 4·5 km per hour walking, how far did he walk during this trip? _____

c Draw a timeline to illustrate your solution. What scale will you use? _____
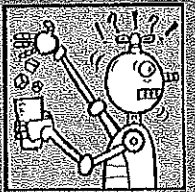
Name

Date

Rates and charges

Don't forget to begin with the closing information and work backwards.

1 On their annual vacation, Mr Misely decided to rent a car to see the countryside.

Rental charges: £82 per day
55p per kilometre

a Mr Misely had to pay £183.75 for the day's rental.

How far did they travel that day? _____

b If they had gone the extra 52 kilometres to see the Lost Valley of Frish,

how much would the car rental have been? _____

2 **Accommodation:** Adults: £55 per night
Children: £25 per night

Total cost for one night's accommodation = £185

How many children do Mr and Mrs Misely have?

_____

3 **Telephone charges:** First minute: 19p
Each additional minute: 15p

When Mr Miseley checked his telephone bill, he thought that his daughter, Chattie, had talked for too long on her calls. How long would Chattie have spoken on the following calls? (HINT: Don't forget to include the first minute.)

a Phone number – 8456 3489 Cost £2.74 _____

b Phone number – 8003 2882 Cost £2.14 _____

c Phone number – 8987 0021 Cost £4.39 _____

Answers

Draw a diagram

I cheese + red pepper, cheese + mushrooms, cheese + celery; cheese/ham + red pepper, cheese/ham + mushrooms, cheese/ham + celery

2 teacher check; all weed, 2 do each of the 2nd jobs, I does each of the 3rd jobs
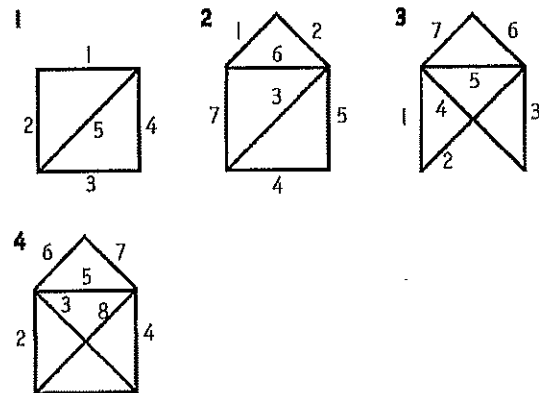
Worksheet 2
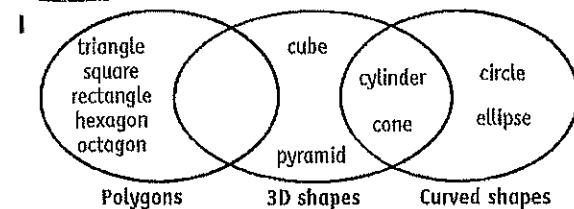I 13; Fran, John, Bessie, Dan Jr, Amelia
2 teacher check

Worksheet 3
I a teacher check timeline   b false
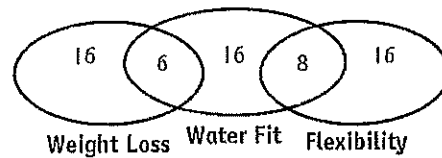2 a teacher check timeline   b true

Worksheet 4

Worksheet 5

| Polygons | 3D shapes | Curved shapes |

2 a

b 3, 28

Worksheet 6
I 62

Weight Loss   Water Fit   Flexibility
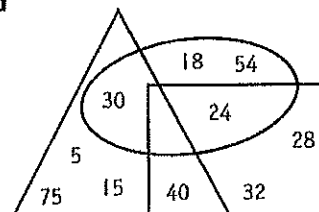
2 29

Horse riding   Cooking   Canoeing
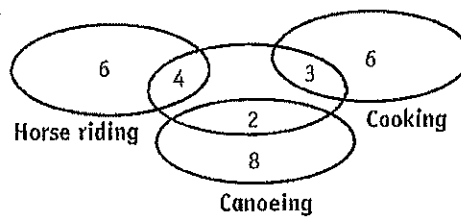
3 a

b 30   c 24

Worksheet 7
teacher check all diagrams
I false   2 true   3 false (same)   4 true

Worksheet 8
I 4 oranges
2 0·9 m (90 cm)
3 £120
4 $\frac{1}{3}$ day = 8 hrs

Look for patterns

Worksheet I
I b
2 c
3 b
4 a
5 teacher check

Worksheet 2

1 a 3, 6, 9, 12, 15, 18, 21, 24

 b 14 000, 1 400, 140, 14, 1.4, 0.14, 0.014, 0.0014

 c 3, 8, 18, 38, 78, 158, 318, 638

 d 4, 7, 13, 25, 49, 97, 193, 385

 e 2, 3, 5, 8, 13, 21, 34, 55

2 Sunday, Tuesday, Wednesday, Thursday, Saturday

3 January, February, March, April, September, October, November, December

4 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37

5 26, 27, 28, 30, 32, 33, 34, 35, 36, 38, 39

6 12, 16, 20, 24, 28

7 3, 5, 7

8 22, 27, 32, 37, 42, 47, 52, 57

9 3

10 7

Worksheet 3

1 a 13, 34, 82   b 49, 69, 97   c 46, 38·5, 26·5, 11·5

2 a

8	1	6
3	5	7
4	9	2

 b

2	7	6
9	5	1
4	3	8

3 a 3 x input + 2; 11, 4, 5, 23   b 4 x input −3; 6, 29, 10

 c input^2 + 1; 50, 8, 226, 20

Worksheet 4

1 14

2 45·2, 42·0, 40·4, 39·6, 39·2, 39, 38·9, 38·85

3 84, 90, 95, 99, 102, 104, 103, 103

4 403·5 m (400·5, 401, 401·5, 402, 402·5, 403, 403·5)

Worksheet 5

1 a ABC 995, ABC 996, ABC 997, ABC 998, ABC 999, ABD 000

 b DJ 96 AA, DJ 97 AA, DJ 98 AA, DJ 99 AA

 c AY 9990, AY 9991, AY 9992, AY 9993, AY 9994, AY 9995, AY 9996, AY 9997, AY 9998, AY 9999, AZ 0000, AZ 0001

 d TZ 998, TZ 999, UA 000, UA 001, UA 002

 e 36 JK 49, 36 JL 49, 36 JM 49, 36 JN 49, 36 JO 49

2 a D6, D8, E0   b Q8, R0, R2   c R9, S1, S3

 d J2, J4, J6   e X0, X2, X4   f Y7, Y9, Z1

3 a add consecutive numbers

 b add consecutive odd numbers

 c consecutive numbers cubed

Worksheet 6

1 15, 31, 63, 127, 255, 511, 1023

2 44, 35, 27, 20, 14, 9, 5, 2, 0 (week 10)

3 −£5, −£4, −£5, −£4 etc.

4 a 1, 0, repeated   b 1, 3, 3, 3, 3 repeated   c 1, 3, 2, 0, 1, 3, 2, 0, repeated   d 1, 3, 1, 3, repeated   e 1, 3, 0, 1, 3, 0, 1, 3, 0, repeated   f 1, 3, 7, 7, 7, 7, 7, 7, repeated

Worksheet 7

1 a 8, 13, 17   b 9, 16, 31   c 14, 87, 235   d 18, 32

 e N x 3 + 2; 7, 10, 16, 46   f N ÷2 +1;1, 4, 8

 g N − 0.5; 5.5, 10, 15.5   h N x 9; 1, 47, 99

 i N x 2 − 2; 9, 14, 30   j N + consecutive odd numbers; 10, 12, 21

2 a N^2 − 1   b N ÷2   c N^3 d N ÷ 4   e N x 3 + 1

Worksheet 8

1 £150, £200, £250, £300, £350, £450, £600

2 a £4 700, £4 600, £4 400, £4 000, £3 200, £1 600, nil

 b Nov

3 a £1405, £1310, £1215, £1120, £1025, £930, £740, £455

 b £75

4 £692

Make a list

Worksheet 1

1 202, 212, 222, 232, 242, 252, 262, 272, 282, 292

2 9 009, 9 119, 9 229, 9 339, 9 449, 9 559, 9 669, 9 779, 9 889, 9 999

3 level, madam

4 161, 262, 363, 464, 656, 666, 767, 868, 969

5 20 − 1 − 02, 20 − 2 − 02, 20 − 3 − 02, 20 − 4 − 02, 20 − 5 − 02, 20 − 6 − 02, 20 − 7 − 02, 20 − 8 − 02, 20 − 9 − 02, 20 − 11 − 02

6 404, 414, 424, 434, 454, 464, 474, 484, 494,

7 121 + 464, 131 + 454, 141 + 444, 151 + 434, 161 + 424, 171 + 414, 181 + 404, 212 + 373, 222 + 363, 232 + 353, 242 + 343, 252 + 333, 262 + 323, 272 + 313, 282 + 303

8 999 − 272, 989 − 262, 979 − 252, 969 − 242, 959 − 232, 949 − 222, 939 − 212, 929 − 202, 898 − 171, 888 − 161, 878 − 151, 868 − 141, 858 − 131, 848 − 121, 838 − 111, 828 − 101

Worksheet 2

1 5 years

2 8 years

3 4 years

Worksheet 3

1 £5, 50p; £5, 20p, 20p, 10p; £2, £2, £1, 50p; £2, £2, £1,
20p, 20p, 10p, £2, £1, £1, 50p, 50p, 20p, 20p, 10p.

2 £2, £2, 50p; £2, £1, £1, 50p; £1, £1, £1, £1, 50p; £1, £1,
£1, 3 × 50p; £1, £1, 5 × 50p; £1, 7 × 50p; 9 × 50p.

3 5 weeks (£19 and £15)

Worksheet 4

1 60

2 4 combinations; 3 red, 2 blue with – 1 y, 4 p; 2 y, 3 p;
3 y, 2 p; 4 y, 1 p

3 12

Worksheet 5

1 6; 2 6

3 Player 1	Player 2	Umpire
Guy	Fabia	Mario
Guy	Hong	Fabia
Guy	Mario	Hong
Fabia	Hong	Guy
Fabia	Mario	Hong
Hong	Mario	Guy

(other combinations are possible)

Worksheet 6

1 teacher check

2 teacher check

Worksheet 7

1 a no b 18

2 10

Worksheet 8

1 18

2 I will be 17, mother 41, father 43

3 teacher check

Work backwards

Worksheet 1

1 2

2 72

3 20

4 48

5 25

Worksheet 2

1 £600

2 £650

3 £1 300

4 £10

Worksheet 3

1 12:40 pm; teacher check

2 1:35 pm; teacher check

3 a 1:50 pm b 15 min

Worksheet 4

1 top £29; skirt £35; belt £15; sandals £49; total £128

2 boots £65; top £45; shorts £35; socks £16; total £161

3 books £90; CDs £75; cards £12; toys £60;
calendars £36; £300

Worksheet 5

1 a Angels 20; Bizzies 10 b teacher check

2 ($\frac{3}{12}$ = 15 hours) a Val 20; Joe 15; Fred 10
b teacher check

3 (15% = £450) 3J £600; 3S £900

Worksheet 6

1 $\blacktriangle$ + 3 + 5 + 5 + 2 = 99; 99 – 2 – 5 – 5 – 3 = 84; 15

2 $\blacktriangle$ + 2 + 2 + 4 + 1 – 1 = 90; 90 + 1 – 1 – 4 – 2 – 2 = 82; 82

3 a Voombahs 81 + 84 + 82 + 83 = 328;
Jetskis 80 + 82 + 85 + 87 = 334
b Vs 83; Js 87

Worksheet 7

1 a Shanghai £1 750; Wellington £875
b teacher check

2 a 38 hr b 171 km c teacher check

Worksheet 8

1 a 185 km b £212.35

2 3

3 a 18 min b 14 min c 29 min

Trial and error

Worksheet 1

1 1 $\frac{7}{8}$ cups pies; 2 $\frac{1}{8}$ cups cake

2 4 adults $\frac{1}{2}$ pie each; 4 children $\frac{1}{4}$ pie each

3 3 peaches, 6 kiwi fruit, 2 apricots, 12 strawberries,
2 bananas

Year 5 Creative Writing Activities *Each activity should take 2-4 sessions*

1. Each week choose a creative writing prompt. (There are 8 to choose from).
2. Plan your writing using the suggested planning frame or the story mountain/story planner. You can copy these into your exercise books.
3. Draft, edit and publish your writing in your exercise books.

Writing Task 1

The **Electric Skateboard**

You have been asked to promote a new type of skateboard. It is powered by an electric motor and has rechargeable batteries. It is operated from a wireless hand controller.
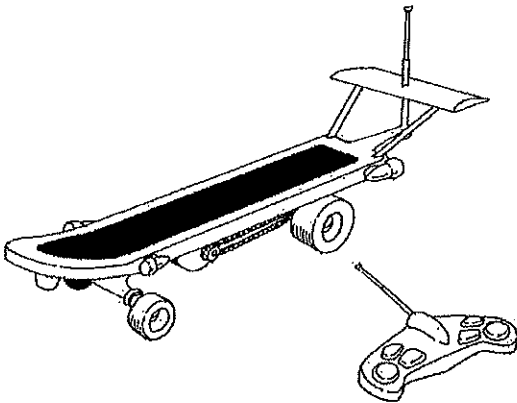
Your task is to write a persuasive article for a parent's magazine explaining the functions and advantages of the electric skateboard.
You need to make it sound like the best Christmas present any child could ever want!
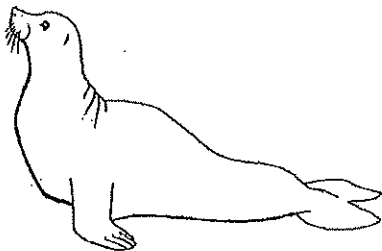
Planning Layout 1

The Electric Skateboard

What are its uses?

How is it unique?

Main features of the electric skateboard:

Why is it fun?

Cost and maintenance?
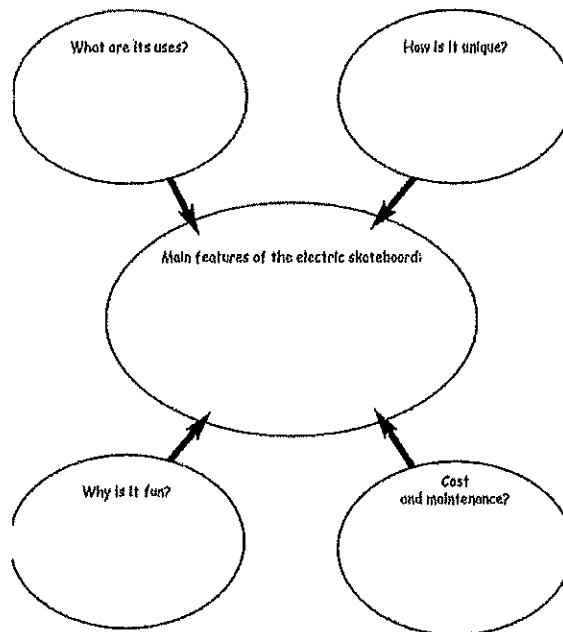
Collect words and phrases to help you persuade parents to buy this skateboard.

Writing Task 2

A Day in the Life of a Zoo Keeper

Here is the timetable for a Zoo Keeper in charge of the seals:

7.00 - 8.00	Food preparation in the Zoo kitchen.
8.00 - 9.00	Feeding the seals and checking they are healthy.
9.00 - 10.00	Cleaning the area surrounding the pool.
10.00 - 10.30	Break
10.30 - 12.00	Accompanying the vet on his rounds.
12.00 - 1.00	Lunch
1.00 - 2.00	Preparation of food and equipment for display to visitors.
2.00 - 3.00	Display for visitors
3.00 - 4.00	Clearing up after visitors and making final checks on the animals.

Your task is to use the information above to write a clear explanation of a zookeeper's day looking after an animal of your choice.

Planning Layout 2

A Day in the Life of a Zoo Keeper

Title:

Introduction:

Food preparation, feeding and cleaning:

Helping the vet to check the animals:

Preparation for display and meeting visitors:

Conclusion:

Writing Task 3

How to Play a Favourite Game

Your school has been asked to make a book of instructions for children's favourite games. These might be games you play at home or school. It could be a game you enjoy playing with your friends. It must not be a game you play on the computer.

Your task is to write a set of exact instructions to explain how to play your favourite game. Remember, the person who will be reading your instructions will never have played this game before.

Planning Layout 3

How to Play a Favourite Game

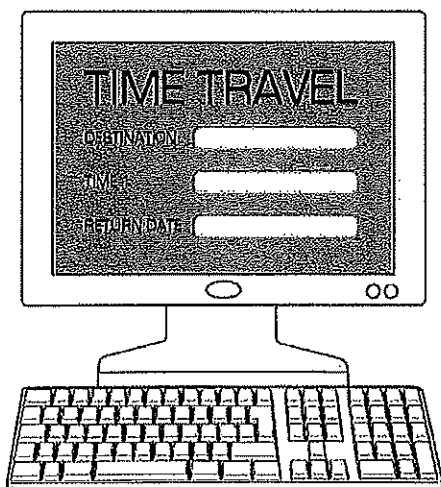Title/Heading of a game that is very familiar to you:

↓

Equipment needed:

↓

What is the aim of the game?

↓

Step by step details:

Writing Task 4

Time Travel

One evening you go to your computer and accidentally press one of the keys you have never pressed before. Suddenly you are transported into a different time!

TIME TRAVEL
DESTINATION:
TIME:
RETURN DATE:

Your task is to write about where you travel to, what the place is like, who you meet and how you manage to get home again.

Planning Layout 4

Time Travel

Where did you travel to and what form did your transport/journey take? (Remember: You can travel back or forwards in time.)

↓

What is the place you visit like?

↓

Who do you meet? What are they like?

↓

How do you manage to get back home?

YOU JUST DISCOVERED A NEW PLANET.

TELL THE STORY.

Write a story about this picture and give your story a name.

If you had one superpower, what would it be? Explain why you have chosen that superpower, what you would do with it, and how it would change your life.

SUPER POWERS
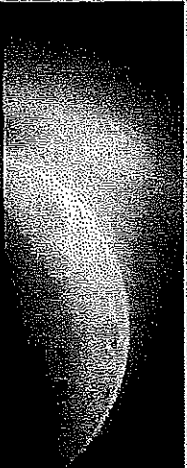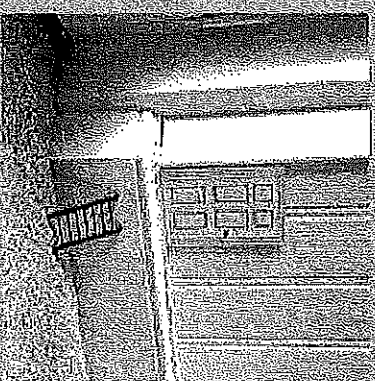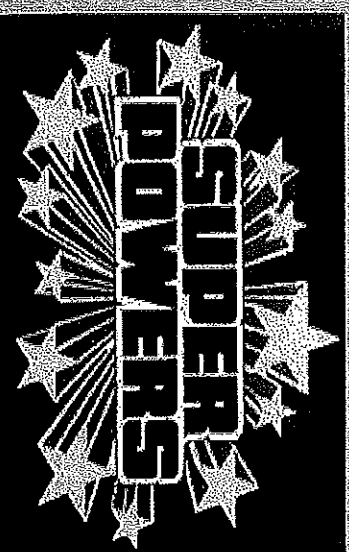

One day, you find this door at the corner of your room. What do you do? Who uses that door? Where does the door take you?

Title:

Author:

Characters   Setting

Opening

Problem

Dilemma

Vocabulary

Resolution

Ending   Moral

Story Planner

Introduction • Introduce the main characters • Introduce the story setting	
Build-Up • Develop the characters and the setting • The points that lead up to the conflict or climax (high point) in the story	
Conflict/Climax • The conflict or climax in the story • How do the characters react?	
Resolution • How the conflict is resolved and the ending to the story	

Year 5 Summer Term 2 SPaG Mat

a

Add an appropriate relative clause to this sentence adding in the correct punctuation.

The magician _____ was _____ performing at a birthday party.

b

Look at the choices of words within the brackets. Circle the correct word to fit the sentence.

Shivering and cold, the children tried to block the (draft/ draught) that was coming from under the door.

The businesswomen had made a sizable (prophet/profit) on her investment.

c

Circle both of the adverbs in this sentence.

Tomorrow, Gita will proudly represent her athletics club in the county competition.

d

Mr Whoops has accidentally jumbled two adjectives that he uses to describe his fantastic yet naughty new puppy. Can you help him to unjumble them?

MSCHEIUSOVI   SLLMAVREUO

e

Can you think of the silent letter word to match the definition?

A piece of land surrounded by water. _____

A medieval soldier that wore armour. _____

f

Rearrange this sentence so that it has a fronted adverbial. Don't forget the correct punctuation.

The racehorses picked up speed to try to win the race as they neared the finish line.

twinkl.co.uk

★★

a

Can you place brackets (parenthesis) around additional detail in this sentence?

Saint George the patron saint of England famously defeated a dragon.

b

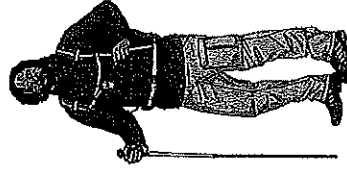Can you think of the –cious or –tious word to match this definition?

Very healthy to eat   Acting in a guilty way

n _____   s _____

c

Are you ready to go hiking, Max?

Can you write Claire's words into a direct speech sentence that uses inverted commas?

d
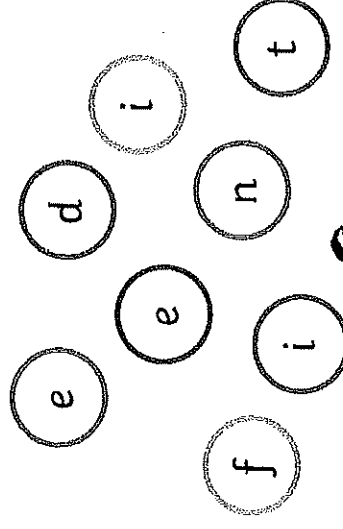
Choose TWO different adverbs of possibility that best fit in these sentences:

The sky had turned pitch black and it was _____ going to rain.

Because the game is so expensive, I _____ can't afford to buy it.

e

Choose the correct form of the verb 'to go' to fit into these sentences.

We'll _____ to the shopping centre later.
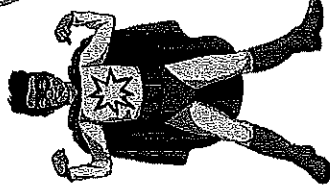
I'm _____ shopping tomorrow.

Last Saturday, I _____ shopping.

f

Mr Whoops has been juggling with the letters from one of his Y5 spelling words – can you spot what it is?

d _____

e   d   i   t
e   n
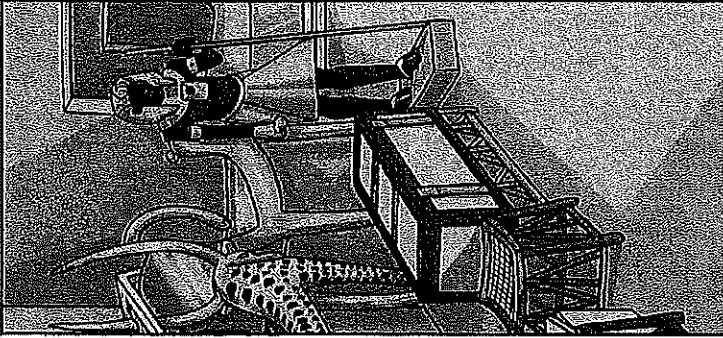f   i

Year 5 Summer Term 2 SPaG Mat

a

Write a sentence about the superhero Laser Vision Man that contains a modal verb and a fronted adverbial. Underline them.

b

Rewrite the sentences and add in the relative pronouns and punctuation that is missing.

Class 12 went to a museum had an Ancient Egyptian exhibition.

Joe was one of the tour guides showed us around.

c

Do these root words need im- or in- prefixes to make a word with the opposite meaning?

_____ capable

_____ proper

d

Do these phrases need 'a' or 'an' as a determiner in front of them?

_____ unlucky number
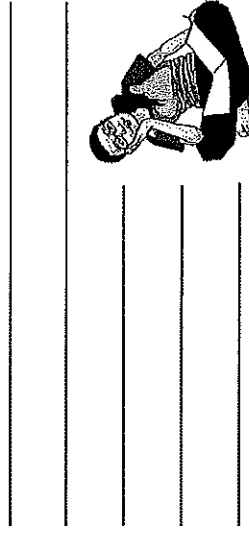
_____ pale colour

_____ honest man

e

Mr Whoops has made THREE clumsy spelling mistakes in his sentences. Can you underline them and correct them?

There was a sudden shrieking noise at the cematary and Josh's stumach dropped to the floor. Just a second later, the temparature dropped.
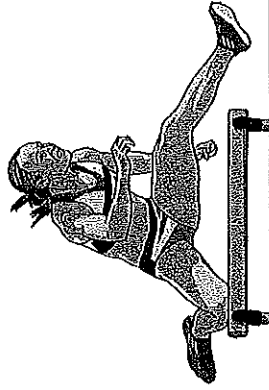
f

Can you change these adjectives into adverbs?

considerable – _____

incredible – _____

a

Place dashes around the parenthesis in this sentence.

Jessica Ennis-Hill the Olympic athlete won her gold medal on Super Saturday.

b

Write TWO different adverbs that describe the verbs in these sentences.

The hungry dog ate _____ .

The ferocious tiger growled _____ .

c

Clumsy Mr Whoops has lost some opposite words. Can you help him?

probable

necessary

d

Can you think of a modal verb, an adverb and a proper noun beginning with...

	modal verb	adverb	proper noun
The letter c?			
The letter m?			

e

Can you think of the word to match each definition?

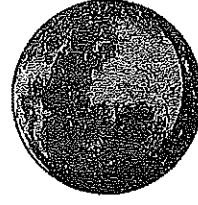(CLUE: They both contain a 'y' that sounds like an 'i')

The country ruled by Tutankhamen. _____

A puzzling situation. _____

f

Rewrite the sentence so that the subordinate clause is at the beginning. Don't forget the correct punctuation.
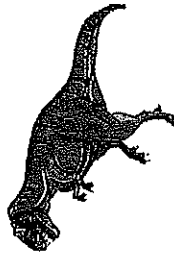
Neil Armstrong bounced off to explore the Moon's surface after planting his flag.

a

Add two possessive pronouns in the following sentence:

"Get off the dinosaur! It's _____ and not _____!"

bellowed Henry as he snatched back the toy.

b

Complete these present perfect sentences using the correct form of the verbs:

Even though I _____ eaten my dinner, I still feel hungry.

When it _____ been raining outside, we have to wear our wellies.

c

Write these homophone words in the correct sentences:

allowed   aloud

Because of his bad behaviour, Luke wasn't _____ to go to the party.

Victoria confidently read her poem _____ to the class.

d

Mr Whoops has got in a terrible muddle turning these nouns into verbs using the suffixes 'ify' or 'ise'. Can you help him?

legal - _____

simple - _____

e

Sort these words into the table:

which   later   who   soon

relative pronoun	adverb

Add another word to each column.
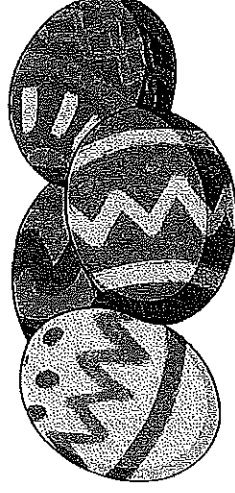
f

Rewrite the sentence below in Standard English.

The children couldn't find no more eggs. They would of been better looking in the bushes.

a

Circle the TWO modal verbs in the sentences:

James knew he could win the game but Anna thought she might beat him!

b

Can you write a pair of homophones to match the clues?

Cutlery is often made of this material.

_____

To take something without permission.

_____

The gangway down the middle of a plane.

_____

An island. _____

c

Mr Whoops has accidentally jumbled up TWO relative pronoun words. Can you help him to unjumble them?

SEHOW   HTTA

d

Write the co-ordinating conjunction that fits best into each sentence:

Diane likes chocolate _____ she adores pizza.

Chris knew the answer _____ he wrote it confidently.

e

Sort these words into the word class table:

the   should   after   inside   ten   below   may   firstly

modal verbs	prepositions	adverbs	determiners

f

'Answer' can be used as a verb and a noun. Write a sentence where 'answer' is used as a verb.

_____

_____

a

Add an appropriate relative clause to this sentence adding in the correct punctuation.

The magician _____ was performing at a birthday party.

Accept any relevant relative clause relating to the magician that begins with the relative pronoun who, whom or whose that is enclosed in commas, e.g. The magician, who was called The Great Lorenzo, was performing at a birthday party.

b

Look at the choices of words within the brackets. Circle the correct word to fit the sentence.

Shivering and cold, the children tried to block the (draft/(draught)) that was coming from under the door.

The businesswomen had made a sizable (prophet/(profit)) on her investment.

c

Circle both of the adverbs in this sentence.

Tomorrow, Gita will proudly represent her athletics club in the county competition.

Circle both tomorrow or proudly.

d

Mr Whoops has accidentally jumbled two adjectives that he uses to describe his fantastic yet naughty new puppy. Can you help him to unjumble them?

MSCHEIUSOVI   SLLMAVREUO

MISCHIEVOUS   MARVELLOUS

e

Can you think of the silent letter word to match the definition?

A piece of land surrounded by water.
island

A medieval soldier that wore armour.
knight

f

Rearrange this sentence so that it has a fronted adverbial. Don't forget the correct punctuation.

The racehorses picked up speed to try to win the race as they neared the finish line.

As they neared the finish line, the racehorses picked up speed to try to win the race.

a

Can you place brackets (parenthesis) around additional detail in this sentence?

Saint George (the patron saint of England) famously defeated a dragon.

b

Can you think of the –cious or –tious word to match this definition?

Very healthy to eat   Acting in a guilty way
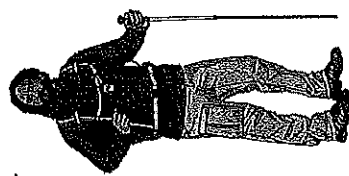
nutritious   **suspicious**

c

Are you ready to go hiking, Max?

Can you write Claire's words into a direct speech sentence that uses inverted commas?

Accept accurately-punctuated speech, e.g. "Are you ready to go hiking, Max?" said Claire.

d

Choose TWO different adverbs of possibility that best fit in these sentences:

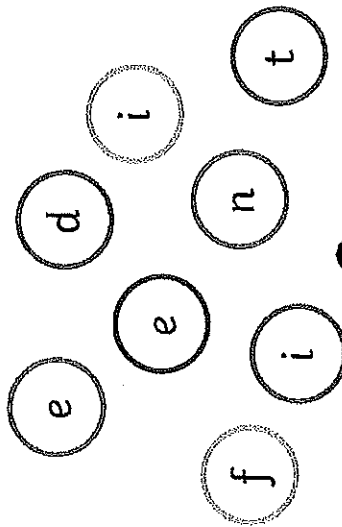The sky had turned pitch black and it was _____ going to rain.

Because the game is so expensive, I _____ can't afford to buy it.

Accept TWO appropriate adverbs of possibility, e.g. certainly, definitely, clearly, obviously, etc.

e

Choose the correct form of the verb 'to go' to fit into these sentences.

We'll ___ **go** ___ to the shopping centre later.

I'm ___ **going** ___ shopping tomorrow.

Last Saturday, I ___ **went** ___ shopping.

f

Mr Whoops has been juggling with the letters from one of his Y5 spelling words – can you spot what it is?

d _efinite_

e   d   i   t

e   n

f   i

a

Write a sentence about the superhero Laser Vision Man that contains a modal verb and a fronted adverbial. Underline them.

Accept any accurately- punctuated sentence with an underlined modal verb and fronted adverbial, e.g. With barely any effort, Laser Vision Man could burn through steel using just his powerful eyes.
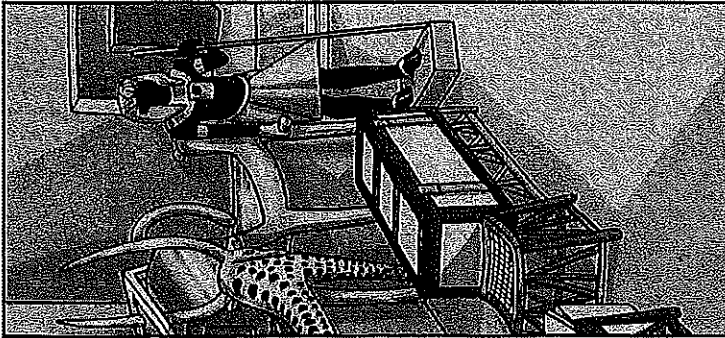
b

Rewrite the sentences and add in the relative pronouns and punctuation that is missing.

Class 12 went to a museum had an Ancient Egyptian exhibition.
Class 12 went to a museum that had an Ancient Egyptian exhibition.

Joe was one of the tour guides showed us around.
Joe, who was one of the tour guides, showed us around.

c

Do these root words need im- or in- prefixes to make a word with the opposite meaning?

<u>in</u>capable

<u>im</u>proper

d

Do these phrases need 'a' or 'an' as a determiner in front of them?

<u>an</u> unlucky number

<u>a</u> pale colour

<u>an</u> honest man

e

Mr Whoops has made THREE clumsy spelling mistakes in his sentences. Can you underline them and correct them?

There was a sudden shrieking noise at the cematary and Josh's stumach dropped to the floor. Just a second later, the temparature dropped.

cemetery

stomach

temperature

f

Can you change these adjectives into adverbs?

considerable – <u>**considerably**</u>

incredible – <u>**incredibly**</u>

a

Place dashes around the parenthesis in this sentence.

Jessica Ennis-Hill -the Olympic athlete- won her gold medal on Super Saturday.

b

Write TWO different adverbs that describe the verbs in these sentences.

The hungry dog ate _____

The ferocious tiger growled _____

Accept appropriate adverbs, e.g. The hungry dog ate greedily and the ferocious tiger growled viciously.

c

Clumsy Mr Whoops has lost some opposite words. Can you help him?

probable	**improbable**
necessary	**unnecessary**

d

Can you think of a modal verb, an adverb and a proper noun beginning with...

	modal verb	adverb	proper noun
The letter c?			
The letter m?			

Accept any modal verbs, adverbs and proper noun starting with the suggested letters, e.g. could, cautiously and Cairo ; might, maliciously and March.

e

Can you think of the word to match each definition?

(CLUE: They both contain a 'y' that sounds like an 'i')

The country ruled by Tutankhamen. **Egypt**
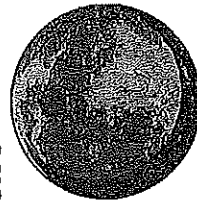
A puzzling situation. **mystery**

f

Rewrite the sentence so that the subordinate clause is at the beginning. Don't forget the correct punctuation.

Neil Armstrong bounced off to explore the Moon's surface after planting his flag.

After planting his flag, Neil Armstrong bounced off to explore the Moon's surface.

a

Add two possessive pronouns in the following sentence:

"Get off the dinosaur! It's **mine** and not **yours**!" bellowed Henry as he snatched back the toy.
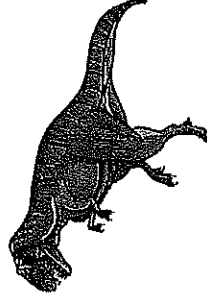
b

Complete these present perfect sentences using the correct form of the verbs:

Even though I **have** eaten my dinner, I still feel hungry.

When it **has** been raining outside, we have to wear our wellies.

c

Write these homophone words in the correct sentences:

allowed   aloud

Because of his bad behaviour, Luke wasn't **allowed** to go to the party.

Victoria confidently read her poem **aloud** to the class.

d

Mr Whoops has got in a terrible muddle turning these nouns into verbs using the suffixes 'ify' or 'ise'. Can you help him?

legal - **legalise**

simple - **simplify**

e

Sort these words into the table:

which   later   who   soon

relative pronoun	adverb
which	**later**
who	**soon**

Add another word to each column.
Accept any relative pronouns and adverbs added to the correct column.
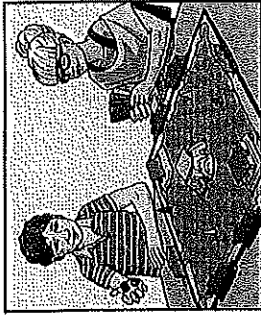
f

Rewrite the sentence below in Standard English.

The children couldn't find no more eggs. They would of been better looking in the bushes.

The children couldn't find any more eggs. They would have been better looking in the bushes.

d

Write the co-ordinating conjunction that fits best into each sentence:

Diane likes chocolate **but** she adores pizza.

Chris knew the answer **so** he wrote it confidently.

e

Sort these words into the word class table:

the should after inside ten below may firstly

modal verbs	prepositions	adverbs	determiners
should	**inside**	**after**	**ten**
may	**below**	**firstly**	**the**

f

'Answer' can be used as a verb and a noun. Write a sentence where 'answer' is used as a verb.

Accept any sentence with 'answer' used as a verb, e.g. Charlie went to answer the knock on the door.

a

Circle the TWO modal verbs in the sentences:

James knew he (could) win the game but Anna thought she (might) beat him!

c

Mr Whoops has accidentally jumbled up TWO relative pronoun words. Can you help him to unjumble them?

SEHOW   HTTA

WHOSE   THAT

b

Can you write a pair of homophones to match the clues?

Cutlery is often made of this material. **steel**

To take something without permission. **steal**

The gangway down the middle of a plane. **aisle**

An island. **isle**

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