EMERGENCY COVER WORKSHEETS IN MATHS

WYN LOTWICK

Illustrated by
FIONA MACVICAR

THE Chalkface PROJECT

INTRODUCTION

The pack *Emergency Cover Worksheets in Maths* is a pack of maths worksheets particularly suitable for substitition and one-off lessons. They contain a variety of topic materials for use by specialists or non-specialists without prior skills teaching. It includes work based on numbers, money, percentages, time, measurement, graphs, spatial concepts, ratio, proportion and statistical ideas. The Teachers' Notes include answers where applicable, and instruction forms to tell substitute teachers what they need to know.

Student suitability You can use the sheets with students at Key Stage 3; their open-ended nature means they can be used across the ability range. Because the pack is photocopiable, you can use it flexibly, with individual students, small or large groups, or across a whole year set.

Using the pack We suggest that teachers be given a copy of the relevant notes for each sheet and sufficient worksheet copies for each class; and that they ensure each pupil has writing materials for the lesson. They may have to read through each sheet with the class group, but thereafter, the lesson should be self-explanatory. Most sheets include discussion and written work, and many include extension work for fast-finishers. If you have a query about how best to use the pack, we are happy to help; please write to us at the address below.

Other linked Chalkface packs There is a range of subject-linked *Emergency Cover Worksheets* titles all especially designed for substitute teaching.

The people involved Wyn Lotwick was educated at the Universities of Cambridge and Bath and currently teaches in the West Country. The series concept was originated by Ken Pollock. The pack was illustrated by Fiona MacVicar. The cover and series design was by Michael Lopategui, Susan Quilliam was the series editor and Frankie Leibe the subeditor. The Chalkface format was created by Susan Quilliam.

Photocopy laws The text and pictures in this pack belong to *The Chalkface Project Ltd*. However, you may photocopy the sheets, provided you do so only for use within your own institution. If you wish to photocopy for any other use, you must write to us for permission, for which we may charge a fee.

How to contact us The Chalkface Project, PO Box 111, Milton Keynes MK11 1XN
Tel: 0800 781 8858 Fax: 0845 458 5344
E-mail: sales@chalkface.com Website: www.chalkface.com

CONTENTS

——NUMBER PUZZLE 1——
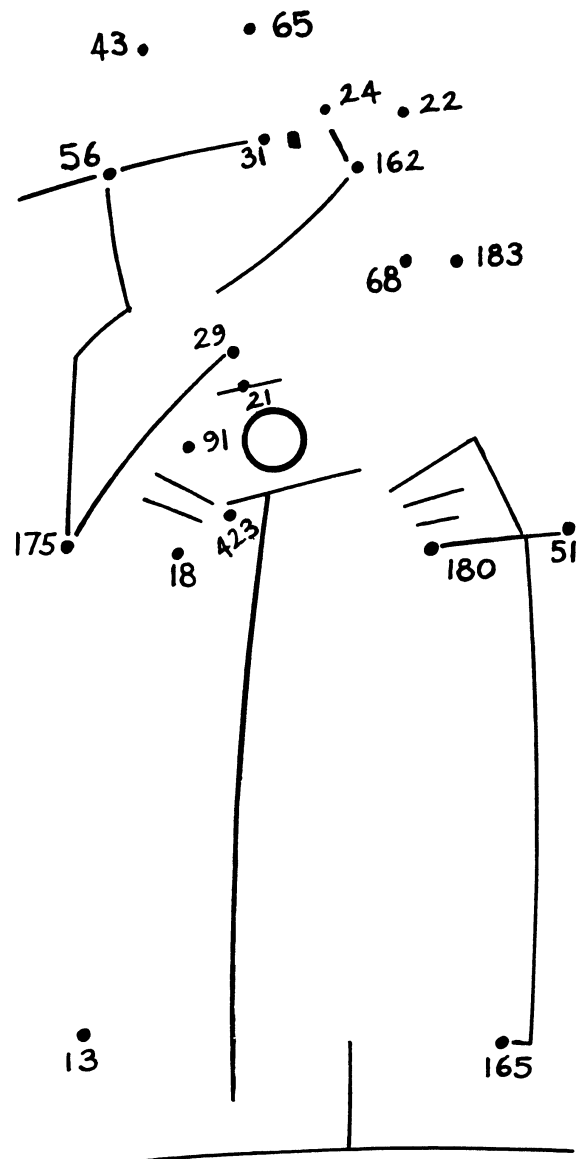
Work out the answers to these questions.

1   231 - 180
2   96 + 87
3   Half of 136
4   18 × 9
5   One quarter of 124
6   132 ÷ 6
7   One third of 72
8   15 + 12 + 38
9   61 - 18
10 The sum of 19 and 37
11 15 × 12
12 42 + 37 + 86
13 91 ÷ 7
14 47 + 128
15 The difference between 96 and 78
16 4230 ÷ 10
17 13 × 7
18 8 less than 37
19 189 ÷ 9

Use your answers to find a coded message.
Each answer stands for a letter, as follows:

13	=	S	56 =	G
18	=	N	65 =	S
21	=	E	68 =	I
22	=	E	91 =	O
24	=	S	162 =	S
29	=	D	165 =	I
31	=	M	175 =	I
43	=	A	180 =	E
51	=	T	183 =	H
			423 =	C

Write out in order the letters which match
your answers. Then put in spaces between
the words to give the message.

You can also use your answers to draw a
picture. Begin with the dot marked with the
number that is the answer to question 1.
Draw a line joining it to the dot marked with
the answer to question 2 — and carry on
until you've finished the picture.

Write your own coded message and make up
a number puzzle to help your friend solve it.
You will need to write the message you want
to send, match a number with each letter of
the message, make up sums to fit the
numbers, then rearrange the sums to present
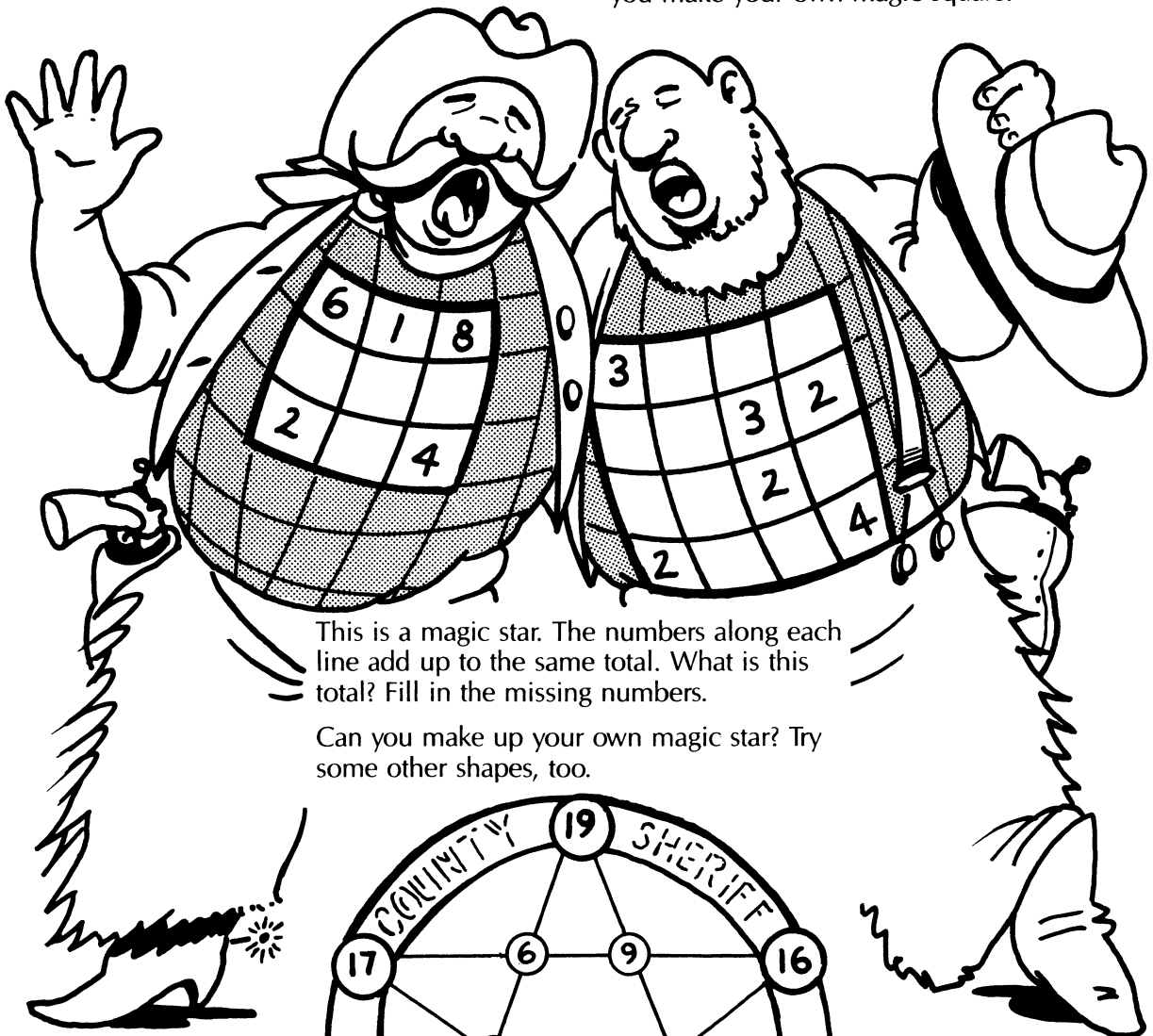to your friend in a different order.

Look at this square.

What is the sum of the numbers in the first row? Every row and column must add up to the same number as this. Fill in the missing numbers. What do you notice about the two diagonals?
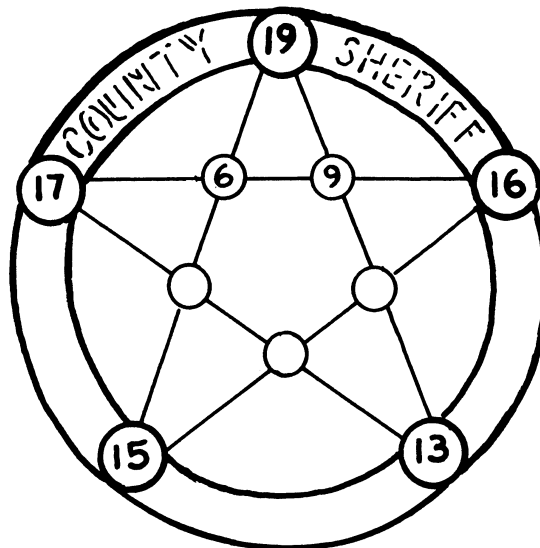
The four numbers in each diagonal of this square should add up to ten. So should the four numbers in each row and column. Use this information to fill in the missing numbers.

Squares like this, where the numbers in each diagonal, row and column add up to the same number, are called magic squares. Can you make your own magic square?
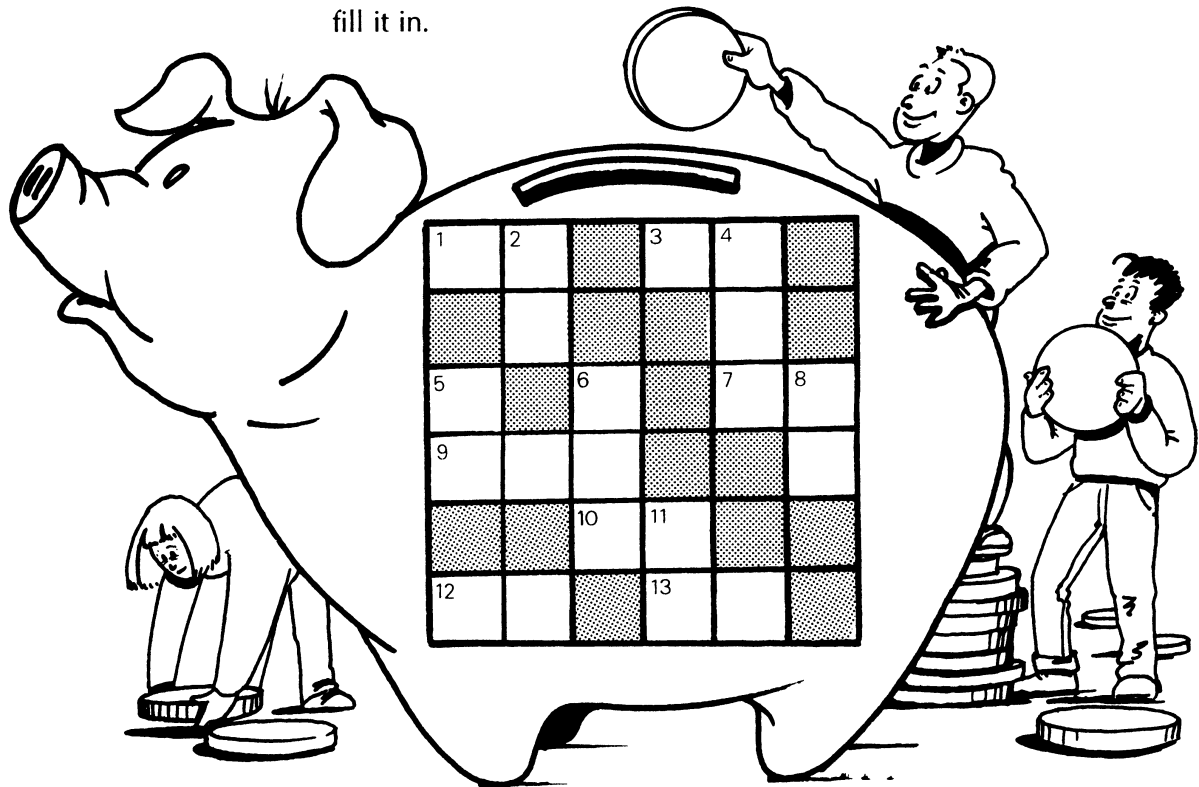
This is a magic star. The numbers along each line add up to the same total. What is this total? Fill in the missing numbers.

Can you make up your own magic star? Try some other shapes, too.

—MONEY CROSSNUMBER—
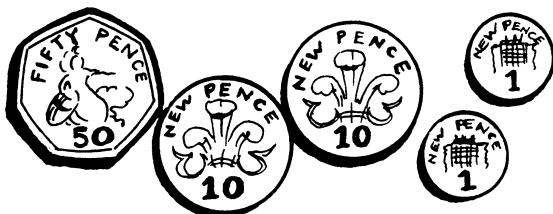
Work out the clues to this crossnumber and fill it in.

Across

1 My newspaper costs 18p. How many pence change do I get from 50p?

3 Pencils cost 6p each. I have 90p. How many can I buy?

7 I buy a biro for 18p and a notepad for 41p. I pay with a £1 note. How many pence change should I get?

9 I buy four books which have been reduced from £1·99 to £1·69 each. How many pence do I save?

10 Two drinks at 28p each and one sandwich at 26p. How many pence?

12 How many pence altogether?

13 Two cakes and two coffees cost £1. A coffee costs 18p. How many pence does a cake cost?

Down

2 Paper cups cost 4p each How many can I buy for £1?

4 I have a £5 note, a 50p piece and two 2p pieces How many pence altogether?

5 Three bars of chocolate at 17p each cost how many pence?

6 A dozen biscuits at 9p each cost how many pence?

8 Potatoes cost 15p a lb How many lbs can I buy for £1·50?

11 Four records at £5·75 each How many pounds do they cost?

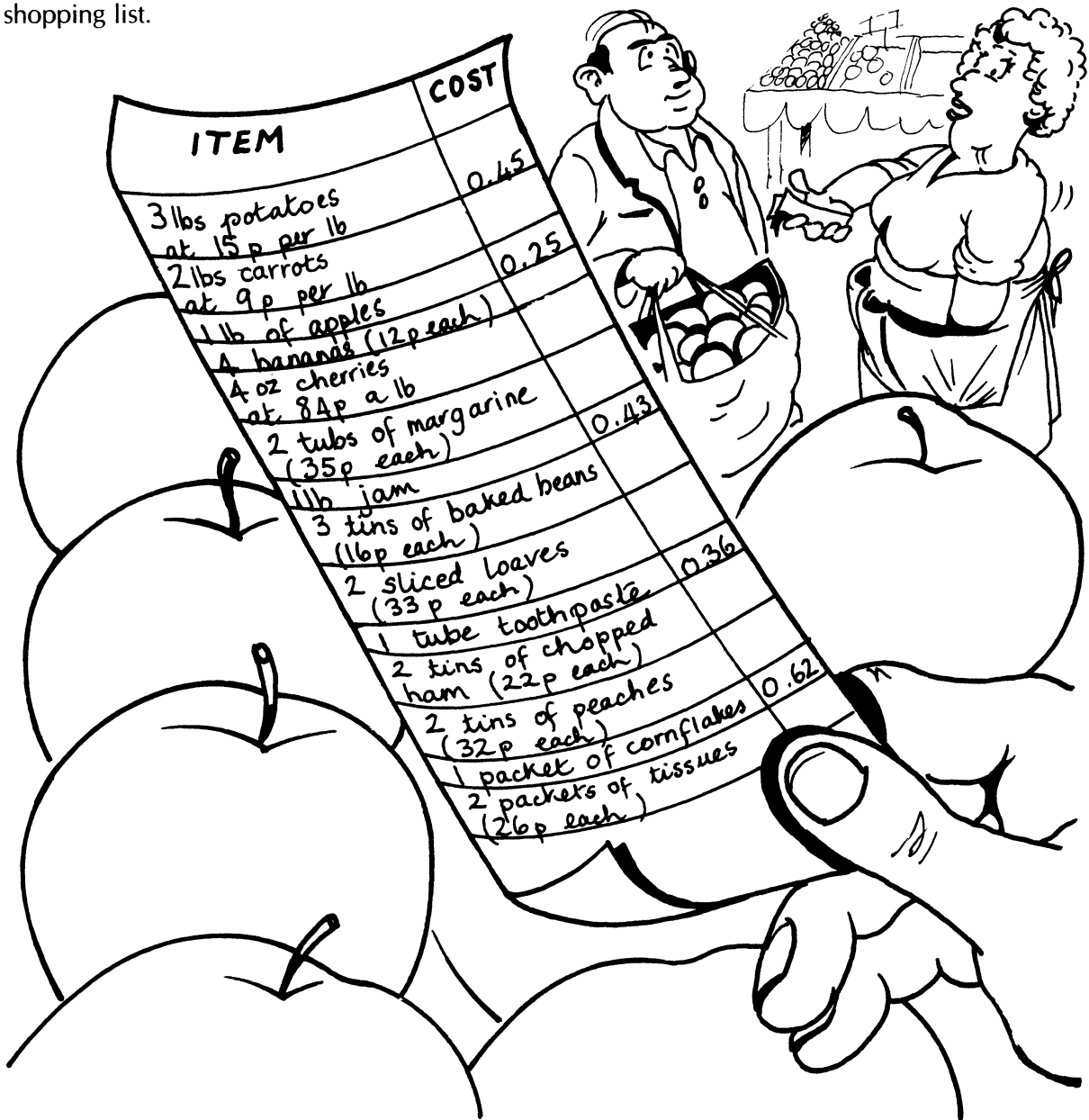Make up your own crossnumber and try it out on a friend. You need to draw the blank grid. You can use the one above if you want to. Then write in the 'across' and 'down' clue numbers, decide on your solutions and make up clues to fit the solutions.
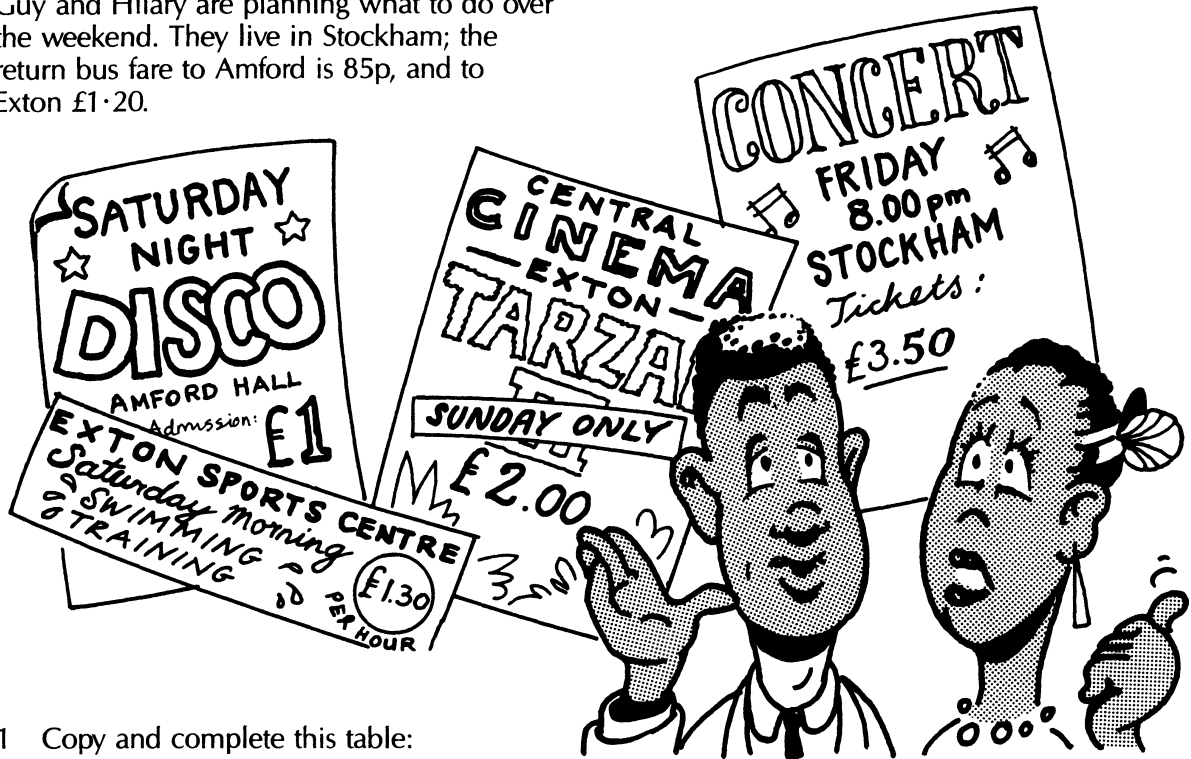
AT THE SUPERMARKET

Mr Gooch is doing his shopping. This is his shopping list.

ITEM	COST
3 lbs potatoes at 15p per lb	0.45
2 lbs carrots at 9p per lb	0.25
1 lb of apples	
4 bananas (12p each)	
4 oz cherries at 84p a lb	
2 tubs of margarine (35p each)	0.43
1 lb jam	
3 tins of baked beans (16p each)	
2 sliced loaves (33p each)	
1 tube toothpaste	0.36
2 tins of chopped ham (22p each)	
2 tins of peaches (32p each)	
1 packet of cornflakes	0.62
2 packets of tissues (26p each)	

1 Copy and complete it.

2 How much does Mr Gooch spend altogether?

3 How much does he spend on fresh fruit and vegetables? How much do the fruit and vegetables (apart from the bananas) weigh altogether?

4 How much does Mr Gooch spend on tinned food? On the rest of the food, apart from tinned, fruit and vegetables? On items that aren't food?

5 What do you spend your money on? Write down the things you buy in a typical week. Gather them into categories (bus fares, games, etc) and add up the total. How much do you spend on food?

WHAT SHALL WE DO AT THE WEEKEND?

Guy and Hilary are planning what to do over the weekend. They live in Stockham; the return bus fare to Amford is 85p, and to Exton £1·20.
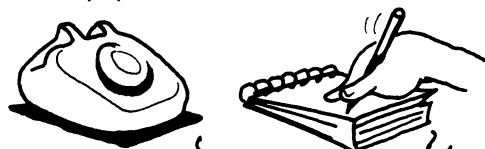
SATURDAY NIGHT DISCO AMFORD HALL Admission: £1

CENTRAL CINEMA EXTON TARZA SUNDAY ONLY £2.00

CONCERT FRIDAY 8.00pm STOCKHAM Tickets: £3.50

EXTON SPORTS CENTRE Saturday morning Swimming training £1.30 per hour

1 Copy and complete this table:

Activity	Cost	Bus fare	Total cost per person	Total cost for two people
disco	£1	85p	£1·85	
concert				
cinema				
swimming (1 hour)				

2 Guy has £9 to spend over the weekend. Can he afford to go to everything? Can he go to three things? Which three?

3 Hilary has £7. Can she go to three things?

4 'Let's do the same things over the weekend,' says Guy. 'We must go to the concert.' What else can they afford to go to? Write out each possibility, together with the total cost per person.

5 In the end, they decide to go to the concert and go swimming. How much money do they each have left?

6 'Tell you what,' says Guy on Saturday afternoon, 'I'll pay for us both to go to the disco tonight if you'll pay your own bus fare.' Can they afford it? How much do they have left to spend on refreshments?
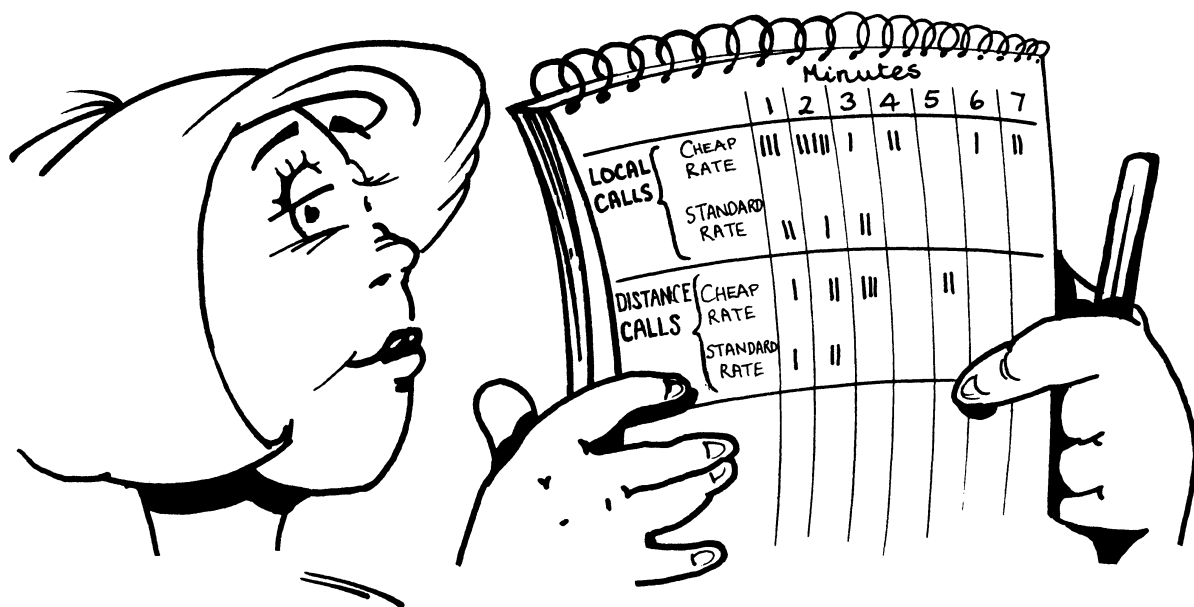
—SHARING PHONE COSTS—

Michelle, Tracy and Carol share a flat. They also share their phone costs. They use this table to work out how much each one should pay

		1 min	2 mins	3 mins	4 mins	5 mins	6 mins	7 mins
LOCAL CALLS	CHEAP RATE	5p	5p	5p	5p	5p	5p	5p
	STANDARD RATE	5p	5p	11p	11p	16p	16p	22p
	PEAK RATE	5p	11p	11p	16p	22p	22p	27p
DISTANCE CALLS	CHEAP RATE	5p	5p	11p	11p	16p	16p	22p
	STANDARD RATE	11p	16p	22p	32p	38p	43p	54p
	PEAK RATE	11p	22p	32p	43p	54p	65p	76p

1 Carol always uses the phone during the cheap rate. During the last three months she has made 15 local calls (none of which lasted more than seven minutes), and ten calls up to 56 km. Of these ten, three lasted two minutes or less, six lasted three or four minutes and one lasted seven minutes. How much should she pay for all these calls?

2 Michelle keeps a table showing the calls she has made.
How much does she owe?

3 Tracy has made only ten calls during the last three months. Each of these lasted five minutes. Six calls were local (four cheap rate, two standard) and four were up to 56 km (all but one on the cheap rate, the other at peak rate). How much should she pay?

4 The girls also share the rental charge for their phone, equally. The rental is £20·50 per three months. How much should they each pay for the rental?

5 Work out each girl's total contribution to the phone bill.

		Minutes						
		1	2	3	4	5	6	7
LOCAL CALLS	CHEAP RATE	III	IIIII	I	II		I	II
	STANDARD RATE	II	I	II				
DISTANCE CALLS	CHEAP RATE	I	II	III		II		
	STANDARD RATE	I	II					

SALE TIME

Julie and Andy go to the sales to buy some new clothes.

How many pence do you save from each pound here?

Julie buys the following:

a blouse, reduced from £8
two pairs of jeans, reduced from £15 each
a skirt, originally priced at £13
three pairs of socks, reduced from £1·50 a pair.

1   How much does each item cost Julie in the sale?
    How much does she spend altogether?
    How much does she 'save' altogether?

2   How much does Andy save on each item?
    How much does he save altogether?

3   How much have Andy and Julie spent between them?
    Can you work out their percentage saving overall?

4   Can you work out how much each of these cost before the sale?

You save 15p from each pound here.

Andy buys:

two pairs of trousers, reduced from £12 a pair
a jacket, reduced from £20
three shirts, originally priced at £7 each.