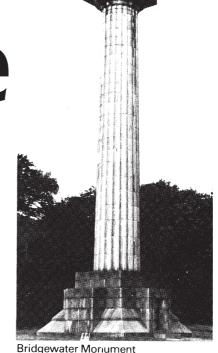
# Armchair reasu Hunt

VLBQHUPRKEĞCYXVLBQHUPRKEĞCXVLBJQHUPRKEĞCXVLBQHUPARKEĞCXVLQHUPARKEBĞCXVLQHUARKETBĞCXVLQHUARKETBĞCXVLQHUARKETBĞCXVL GQJZMFVKCENURDGQJZMFVKCENUDGQJZMFVKCENUDGQJZMFVKSCENUDGQJMFVKSCENUPDGQJMFVKCENURPDGQJMFVKCENURPDGQJMFVKCENURPDGQJMFVK AKJPZMHQVISXFNAKJPZMHQVISXNAKJPZMHQVISXNAKJPZMHQEVISXNAKJZMHQEVISXNAKJZMHQVISXFRNAKJZMHQVISXFRNAKJZMHQVISXFRNAKJZMHQV

TJCFDUORQHZBGNTJCFDUORQHZBNTJCFDUORQHZBNTJCFDUORMQHZBNTJCDUORGMQHZBNTJCDUOMQHZLBNTJCDUOMQHZLBNTJKCDUOMQHZLBNTJK BMJFYECGOHOUSIBMJFYECGOHOUIBMJKFYECGOHOUIBMJFYECRGOHOUIBMFYECSRGOHOUIBMFYECRGOHTOUIBMFYERGOHWTOUIBMFYERGOHTOUI BNRCUXWKLWATDPBNRCUXWKLWATPBNRCUXMKLWATPBNRCUXWKJLWATPBNRUXWKGJLWATPBNRUXMJLWAHTPBNRUXMJLWAHTPBNRUXMJLWAHTPBNRCKUXM



Answers and and Results

1996-7

# **Contents**

	Page
Message from the Team	2
How to find the Treasure?	3
The Scoring System	4
Solutions to the Puzzles	5
The Red Herrings	10
Answers to the Questions	12
The Supplementary Clue Sheet	26
War Stories from the Entrants	28
Prizewinners and Placings	31
Errata	32

# Message from the Team

We would like to thank all of you who took part in this year's Armchair Treasure Hunt. Judging by the entries a lot of effort has been expended. We have learnt a lot we did not know about swans swimming on flags in Western Australia and fifty seven ways to divide up a circular field. We did plan that this year's hunt might entail more than one site visit, however we did not anticipate the many nocturnal visits that were made to Osterley Park, Berkhamstead Castle, Sainsbury's car park in Hanwell and most open spaces in the northern Chilterns.

When devising this year's Armchair Treasure Hunt we were concerned that we might have made it too easy. We were particularly concerned to strike a balance between those with internet access and those without. Some of our questions seemed to be too easy when we tested them against the internet. As you are no doubt aware we erred the other way, both for the questions and the puzzles. The only parts that were completely solved on time were the Red Herrings!

Next year Pablo will be taking up the mantle and we look forward to returning to your side of the competition. Pablo asks me to tell you that he has had an idea for a totally different, and easier, Armchair Treasure Hunt.

Once again thanks for taking part.

David B Jeanne C Ruth F David Kee John R

1 February 1997

# YLCXPKOWAJVERGYLCXPKOWAJVRGYLCXPKOWAJVRGYLCDXPKOWAJVRGYLCXPKOWAJVRGYLCXPKOWAJVRBGYLCXPKOAJVRBGYLCXPKOAJVRBGYLC

#### How to find the treasure?

There were two main themes:

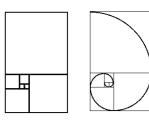
the pictures... Gold The Fibonacci Series the circled numbers

the bus routes

the Barbara Cartland titles...

The ratio of successive terms in the Fibonacci Series converge on the Golden Mean, the proportions of the Golden Rectangle. The Golden Rectangle was the deeply hidden primary theme of this treasure hunt (so deeply hidden that no one noticed it).

The Golden Rectangle was known to the ancient Greeks, although this knowledge was omitted from the last update to the Logica Way. It has the property that if a square is subtracted from one side the remaining rectangle has the same proportions as the original. This process can be repeated and a spiral drawn until the centre of the spiral is reached.



Confirmation of the importance of the Golden Rectangle came from the following:

- Au (gold) upside down in a golden rectangle on page 3
- Each page has a border of golden rectangle proportions, as has this one
- The Logica ¶ on page 1 is at the centre of a golden rectangle spiral



Had you attempted to subtract a square from page 12 you would have noticed that the bottom of the square was level with the letter C in the vertical lines of text. This letter was in the top left hand corner of page 11. Similarly with pages 10, 8, 6, 4 and 2 a subtracted square was level with the letter on the following page. i.e. the golden rectangle spiral started on page 12 and passed through each page until it reached its centre on page 1.



Page 12

Armed with the knowledge that the Golden Rectangle has a spiral that converges to its centre where there is a Logica 1, and page 1 "...look for the Logica 1, the treasure box is underneath", it is now a matter of interpreting the instructions on the back page.

"To find the treasure start from the ancient monument at the edge of the whirlpool. The Treasure is at the centre. ... The sentence is a good starting point.'

The whirlpool is the spiral. The sentence reveals **Three Bridges**, an ancient monument in Southall. The graphics on the top left hand corner of page 12 are found at Three Bridges confirming it as the start point of the spiral. Since the spiral is constructed by ever decreasing rectangles all that is needed to determine the centre is another rectangle on the spiral. The code on page 2 decodes to PAGE EIGHT CHILTERN HILLS NORTH. The top left hand corner of page 8 decodes to a grid reference. It is now a simple mathematical projection to get to

the centre of the spiral, Moneybury Hill in Ashridge Park, hinted at by page 1 "... buried treasure out there" and page 12 "... box contains £s...". On the map at the location indicated is FB, i.e. footbridge. That this is the treasure site is confirmed by the code on page 1 which decodes to THE FOOTBRIDGE. The treasure was underneath, albeit too well hidden for at least one team that visited the area!

# The Scoring System In the remainder of this document we descrand questions. The points awarded to a tear

In the remainder of this document we describe the answers to puzzles, red herrings and questions. The points awarded to a team that had the correct answer is shown in italics in brackets just after the explanation. For the numbered questions the letter to be used when constructing the sentence precedes the points, e.g.

**96.** Who was the first person to throw a custard pie in a film?

Mabel Normand. She threw one at Fatty Arbuckle in the film "A Noise from the Deep" in 1913. (N 23)

So if your team got Mabel Normand for question 96 it would have received 23 points. Since the surname starts with N that is the letter to be used in constructing the sentence.

The formula used for setting the points value to a puzzle, question or red herring solution was (n-c+1), where n is the number of entrants to this year's Armchair Treasure Hunt and c is the number that had the correct answer. Consequently solutions that were hard to find scored more points than those that were easier.

IOVCIFSXLAZŶMQHOVCIFSXLAZMQHONVCIFXLAZEMQHOVCIFJXLAZEMQHVCIFJXLAZEMQHVCIFXLAZBEMQHVCIFXLAZOBEMQHVCIFXLAZBEMQSHVCI OQKVNZMSIXLFGAOQKVNZMSIXFGAOWQKVNMSIXCFGAQKVNEMSIXCFGAQKVNYEMSIXCFGAQKVYEMSIXCFGAQKVYEMSIXCFGOAQKVYEMSIXCFGOA DXOQZJHYSVMEAPDXOQZJHYSVEAPDRXOQZHYSVMEAPDXOQZJHYSVMEAPXOQZWJHYSVMEAPXOQMJHYSVMEAPXOQWJHYSVMEAFPXOQWJHYSVMEAFPXOQWJHYSVMEAFPXOQWJHYSVMEAFPXOQWJHYSVMEAFPXOQWJHYSVMEAFPXOQWJHYSVMEAFPXOQ

Where you have not got our answer we have attempted to research yours, with more enthusiasm if you provided a source. In some cases we have accepted alternative answers. In many cases we just think you guessed wrong but, as you will see, in one particular case we fell victim to a hoax!

If you found the treasure you scored (n-r+2) points where r was the number on the raffle ticket in the treasure box when found (1 for the first finder, 2 for the second, etc.).

### **Solutions to the Puzzles**

#### The Gold Theme

Each page had a picture with a gold connection:

Page	Description	Points
1	Golden Eagle (Juvenile)	(18)
2	Golden Apples of Hesperides	(18)
3	McDonald's Golden Arches	(18)
4	Golden Horn (Istanbul)	(11)
5	Olympic Gold Medal (1972 Winter)	(27)
6	Golden Syrup	(12)
7	Leopard's Head Assay Mark for Gold	(18)
8	Golden Gate Bridge (San Francisco)	(14)
9	Golden Temple Amritsar	(18)
10	Goldfinger Cactus	(24)
11	Golda Meir	(14)
12	Golden Hind	(17)



Page 7 contained the alchemy symbol for gold (27).



#### The Fibonacci Series Theme

FXEKGHURBZISLJFXEKGHURBZILJFXEKGHURBZILJFXKGHUARBZILJFXKGHUARBZILJCFXKGHARBZILJCFXKGHARBZILJCFXKGHARBZILJCFPXKGHAR GSQIBYRHWNMAUPGSQIBYRHWNMAUPGSQIBYRHWNMAUPGQIBYCRHWNMAUPQIBYXCRHWNMAUPQIBXCRHSWNMAUPQIXCRHSDWNMAUPQIXCRHSDWNMAUPQIX UTRQPGYEWZBHFLUTRQPGYEWZBFLUTRQPGYEWZBFLUTRQPGJYEWZBFLUTQPGJYEWZBKFLUTQPGJEWZBCKFLUTQPGJWZBCKOFLUTQPGJWZBCKOFLUT

GLJOKDVIHBFZRGLJOKDVIHBFZRGLJPOKDVIHBFRGLJPOKDVIHZBFRGLJ

POKDVIHZBFRGLPOKDVYIHZBFRGLPOKDYIHZSBFRGLPOKDYIHZSBFRGI

The circled numbers on each page were the successful **lottery numbers** for weeks 1,1,2,3,5,8,13,21,34,55,89 of the lottery. The lottery number on the back page was for week 144. Many of you spotted this Fibonacci Series (21).

The London locations on each page were **bus route destinations**. The Routemaster on page 4 (RMC 1453) was a bit of a giveaway and most of you spotted that the routes that had these destinations formed a Fibonacci Series (23).

Route	Destination
1	Rotherhithe
1	Surrey Quays
2	Crystal Palace
3	Oxford Circus
5	Old Street Station
8	Bow church
13	Aldwych
21	Avery Hill
34	Walthamstow Central Station
55	Clapton
89	Bexley Station
144	Muswell Hill Broadway



The strange titles on each page were **Barbara Cartland titles** (to call them novels is putting it a bit strong). The picture of Barbara was not such a giveaway as the bus (9). However, many of you still managed to notice that the order of publication of these novels was yet another

(14)

(30)

Fibonacci Series (24).

- 1 Jigsaw
- 1 Jigsaw
- 2 Sawdust
- 3 If the Tree is Saved
- 5 Sweet Punishment
- 8 Not Love Alone
- 13 Desperate Defiance
- 21 Now Rough Now Smooth
- 34 The Dream Within
- 55 The Kiss of Paris
- 89 The Reluctant Bride
- 144 Never Laugh at Love



It was around this time that some of you noticed that the **questions without letter answers** were in a Fibonacci Series 1,2,3,5,8,13,21,34,55,89 (26).

The Fibonacci Series is also visible leaves are distributed about the stem the spiral on page 5 was an example



in the living world and can be seen in the way of plants. This is known as **PHYLLOTAXIS** and (21).

The mirror writing on page 3 was to misdirect you into thinking Leonardo da Vinci. However most of you made the connection with the Tower of Pisa on page 8 and formed **Leonardo da Pisa** (23), Fibonacci's other appellation.

Page 5 contained **Liberabaci**, most of you did not try to decode this, since it was in the same font as ETAONRISH (more of this later) and noted that it was the book in which the Fibonacci Series was first written down (21).

#### The Golden Rectangle Theme

Each page had a **golden rectangle as a border** (28). You will have noticed that all pages in these answers have a similar border. The lines of letters down the side are not meaningless but they are a red herring to draw the eye away from the strange shape of the border - but more of that later.

Page 1 had the **Logica 1 at the centre of the golden rectangle spiral** (30). The diagram to the right shows how the centre is determined, it is the intersection of diagonals in successive rectangles.



Page 3 had **Au** (chemical symbol for gold) upside down in a golden



rectangle (27).

#### The Rosetta Stone

On page 7 was the traced outline of the **Rosetta Stone** (18). The Rosetta Stone was the key to decoding ancient Egyptian writings. It contained the same text in multiple languages, one of which was understood by the archaelogists.

On this stone the first line was the word that all cryptologists want in their clear text since it

contains the most common letters in the English language. Were we really making it easy? Each line of text on the stone was in a font that matched text elsewhere, namely:

Line 1 corresponded to text on page 5

Line 2 corresponded to text on page 4

Line 3 corresponded to text on page 9

Line 4 corresponded to text on page 2

The text on page 5 was therefore in clear and has been dealt with under "The Fibonacci Series theme". We had hoped that someone would attempt to decode it but there is no evidence that this happened.

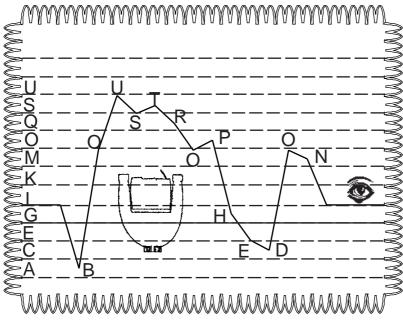
The text on page 4 can be decoded to **PHYLLOTAXIS** (25) using a Vigenere cipher with a key of AVIGENERE, i.e. another reference to the Fibonacci theme. If you are unfamiliar with this simple cipher see one of the later sections.

The text on page 9 is a cipher that has appeared with monotonous regularity in Armchair Treasure Hunts. It was encoded using the Playfair cipher with a key of APLAYFAIR. It decodes to **TOO MUCH PLAYFAIR MAKES YOU BLIND** (25). If you are unfamiliar with this simple cipher see one of the later sections.

The text on page 2 is a simple substitution cipher (one letter for one symbol) and is known as the **Gold Bug Code** (25), it first appeared in a book of that name by Edgar Allen Poe. i.e. another reference to the gold theme. Another hint towards this code is the quote on that page which was by **Mr. Poe** (27). The text decodes to **PAGE EIGHT CHILTERN HILLS NORTH** (18)

#### The Other Codes

MAZWUDSNYTCEĪOMAZWUDSNYTCEOMAZWUDSNYTCEOMAZUDSNBYTCEOMAZUDSNBYTCEŘOMAZUDSNYTCEŘOMAZUDSNYTCEŘOMAZUDSNYTCEŘOMAQZUDSNYTCEŘOMAQZUDSNYTCEŘOMAQZUDSNYTCEŘOMAZUDSNYTCEŘOMAZUDSNYTCEŘOMAZUDSNYTCEŘOMAZUDSNYTCEŘOMAZUDSNYTCEŘOMAZUDSNYTCEŘOMAZUDSNYTCEŘOMAZUDSNYTCEŘOMAZUDSNYTCEŘOMAZUDSNYTCEŘOMAZUDSNYTCEŘOMAZUDSNYTCEŘOMAZULHU UGMILHNOKOBVPRUGMILHNOKOBVRUGMXILHNOKOBVRUGMILHNUQKOBVRUGILHNMUQKOVRUGEILHNUQKOVRUGEILHJOKOCVRUGMEILHUGKOVRUGM RYUQSGXNTPKHVERYUQSGXNTPKHERYUQSGXNTPKHERYUQSGXNAFTPKHERYUSGXNAFTPKAERYUJSGXFTPKNAERYUJSGXFTPKAERYUUJSGXNUTPKHPPYFSUQOCNEKHBPYFSUQOCNEKHBPYFSUQOCNEKHBPYFSUQOCNEKHBPYFSUQOCNEKHBPYFSUQOCNEKHBPYFSUQOCNEKHBPYFSUGOCNEKHPFTSUGOCNEKHBPYFSUGOCNEKHBPYFSUGOCNEKHBPYFSUGOCNEKHBPYFSUGOCNEKHPFSUGOCNEKHBPYFSUGOCNEKHBPYFSUGO



Page 3 had a graph like line run-≥ ning from one side of the picture to the other with an eye above the flat terminating end. If each 

 McDonald's M was taken as two sthe word **BOUSTROPEHDON** (25) is decoded. Boustrophedon means writing that alternates from left to right and right to left. Confirmation of this is the upside down **jumper** (29) (copied from a previous ATH) which is being unravelled from left to right. As you will see later this knowledge is critical to unravelling the sentence which was written from

left to right and right to left on alternate pages.

Page 1 had that very odd code that proved very difficult. Codes in mystery stories are not uncommon, e.g. Poe's Gold Bug code above and Conan Doyle's Dancing Men which has appeared in a previous Armchair Treasure Hunt. This one is from the adventures of "The Shadow"

as recounted by Maxwell Grant in *The Shadow Magazine*. Grant devised many codes but this one from The Shadow novel *Chain of Death* (30) is one of his best. It is not the symbols that are the code but the spaces between them!

ПАП	[F [	□ k	ГРП	LΙυΠ	
∏в]	[G]	[] L ]	[Q]	[v]	Lz[
[]c[	[ H []	M	F R		LJ
	[1]				
[]E			ГтЦ	4	

The code consists of paired symbols, arranged to form an alphabet, the letters appearing between each brace, as follows:

Each of these symbols consists of two half-symbols. In writing a message, any convenient half-symbol is used for a beginning. To it is attached

the left half-symbol of the first letter. A space follows; then comes the right half-symbol of the first letter. To it, is attached the left half-symbol of the second letter; a space, then the right half-symbol of the second letter. This continues until the end of the message is reached when an odd half-symbol is tacked on, to make the whole message appear uniform.

If you look at the make-up of the letters and the various  $\neg aaaaa$  on pages 2-5 and 8-11 is it now becoming clear?  $\neg$  is NOT and it was intended as a hint to solving the code - but **far too obscure** (30). And of course the rectangles used in the construction of the code were golden!

The location of the treasure at Moneybury Hill.

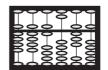
The letters at the top of the odd numbered pages that **confirmed the spiral of rectangles** (30) were all in different fonts, namely:

- H Boulevard
- V Rockwell Condensed
- Z Imprint MT Shadow
- W Desdemona
- R Goudy Stout
- C Engravers MT

First letter of font spells **BRIDGE** (30), yes this was too obscure and we did not expect anyone to get it - and you didn't need to.

#### Page Eight

Top left was an abacus with the number 996085(18) on it. You read an abacus from left to right, counting the beads close to the central bar. Those above count 5 and those below 1. Most of you appreciated that this was a grid



reference on the Chiltern Hills North map mentioned earlier. Most of you seem to have visited Berkhamstead Castle, the location. Many of you are now very familiar with its features, it is even the base of a Treasure Hunting club! We have never been there.

The man pictured on page 8 was **David Livingstone** (30), an *explorer*. This was a strong hint that the Chiltern Hills North map from the Ordnance Survey *Explorer* series was key to your search. In fact most of you realised this and we understand that most areas of this map with any kind of golden or royal connection have been thoroughly excavated.

The +/- 10% was not another code, although many many of you spent happy hours attmepting to unravel it, but a hint again to use the map. If you never found the start point of the spiral but you did manage to work out the grid reference from the abacus code this was supposed to have been

MXSLBWIFKTOYOMXSLBWIFKTOYUMXSLVBWIFKTOYUMXLVBWIZFKTOYUMXVBWIZFKTDOYUMXVBWZFKTIDOYUMXVBWZFKTIDOYUMXSLBWIFKTOYUMXSLBWIFKTOYUMXSLXBWIFKTIDOYUMXSLBWIFKTIDOYUMXSLBWIFKTIDOYUMXISQUTHCOEVKNWRISQUTHCOEVKNWRISQUTHCOEVKNWRISQUTHCOEVKNWRISQUTHCOEVKNWRISQUTHCOEVKNWRISQUTHCOEVKNWRISQUTHCOEVKNWRISQUTHCOEVKNWRISQUTHCOEVKNWRISQUTHCOEVKNWRISQUTHCOEVKNWRISQUTHCOEVKNWRISQUTHCOEVKNWRISQUTHCOEVKNWRISQUTHCOEVKNWRISQUTHCOEVKNWRISQUTHCOEVKNWRISQUTHCOEVKNWRINGUTHCOEVKNWRISQUTHCOEVKNWRISQUTHCOEVKNWRINGUTHCOEVKNWRINGUTHCOEVKNWRISWUTHCKSWHNODGIFUTVCKSWHNOULZWGFONUTZWGFONUTZWGFONUTZWGFONUTZWGFONUTZWGFONUTZWGFONUTZWGFONUTWCKSWHNODGIFUTVCKSW ZVPGFWMIDHEYJBZVPGFWMIDHEYBZVPGFWMICHEYBZVPGFWMICDHEYBZVPFWMICDHEYBZVPFWMIDHEYUBZVPFWMIDHEYUBZVPFWMIDHEYUBZVPOFWMIDHEY

the backup solution. The abacus grid reference fixes one corner of a rectangle on the spiral. Not a lot of good if you cannot fix another point? Well you know that the treasure is at the centre of the spiral on this page (as it is on all pages) so if you know the scale of the page you could draw an arc based on Berkhampstead Castle and the arc will pass through the treasure site. The +/-10% was supposed to indicate that the scale of the page was within 10% of the scale of the Explorer map, 1:25,000 (30). So draw a broad arc and look where it passes through for likely sites and Moneybury Hill just jumps out at you. As mentioned earlier Moneybury Hill (30) was hinted at by page 1 "... buried treasure out there" and page 12 "... box contains £s...".

#### Page Twelve

At the top left of this page are two graphics. These are from **Three Bridges** (30) the location identified by the sentence (described later). Three Bridges is the only location in England (and possibly the world) where a railway goes under a canal at precisely the spot where a road goes over the canal. This site has been designated an ancient monument and can be found in Southall. The graphic with the vaguely visible words is from the road bridge and confirms the location. The 3T is from the weight limit sign on the bridge and is the start point of the spiral and points to its continuation on the next rectangle.



# The Red Herrings

#### Those vertical lines of text

Some very sophisticated analysis was done on this text. Extensive software was written to determine letter frequencies and patterns were discovered. Well frankly that was the intention. We hoped it would take a long time for you to realise that it couldn't be that hard - there was a trick somewhere.

The picture on page 3 contained a Wand and an eye, or "..., magic wand, eye, ..." as one team noted. They did not make the **Magic Eye** connection (28). If you apply magic eye (i.e. squinting) techniques to the lines of vertical text on pages 1-12 you would have found they spelt:



#### OURWORLDCOMPUSERVECOMHOMEPAGESFINNVIEW (28)

The lines of text have been repeated in these answers in case you wish to verify this claim. On page 7 was the text http://8.10.3/9/8/=EREWHON. If the numbers are taken as a way of separating the long text string you get a valid internet address:

#### http://OURWORLD.COMPUSERVE.COM/HOMEPAGES/FINNVIEW/

Since this was equated to erewhon (anagram of **NOWHERE** (22)) several teams decided (correctly) that this thread of research was going nowhere.

Other teams ploughed on and **visited the web site** (28). They were confronted by the web page on the right (you may visit it now if you wish). At this point some teams saw the Henry VIII

picture and decided since he was Defender of the Faith and page 12 stated "... if you find yourself alongside the Defender of the Faith then you really have reached a brickwall and had better think again" that now was the time to throw in the towel.



You have made some progress.



To get further you need to send an email to KEED@LOGICA.COM.

Include ATH500 in the Subject:

Include the 13 character and 17 character code words in the text.

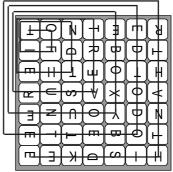
AS ONE 30 CHARACTER WORD!

One team had the determination and courage to continue. For three weeks they attacked the codes until they finally broke through and received the rather poor picture on the right with a highly enhanced **red tinge** (29). It is rumoured that they finally broke through by appealing to the newsgroup sci.crypt for help so don't have too much sympathy for them. The automatic email response is still in operation if you want your own copy of the picture. You will need the 13 and 17 character code words associated with Henry VIII and the jumper but we are sure you will not now find that a problem.



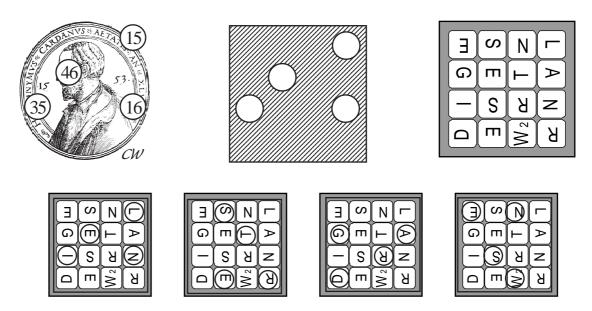
The Letter Squares

Page 10 spells **TO FIND THE TREASURE BOX YOU NEED TO DO BETTER THAN THIS D KEE** (23)



VOATWSRZFBINHDVOATWSRZFBIHDVOATLMSRZFBIDVOATLMSRXZFBIDVOALWSRJXZFBIDVALMSRZKFBIDVALWSJXZFHMBIDVALWJXZFHPMBIDVALMJXZHPMBICDVALWJ

Page 12 spells **LEINSTER GARDENS W2** (27). The square is decoded using a **Cardano Grill rotated clockwise** (27). That this is what you need to do is indicated by page 10 which shows a picture of the great man, indicates that clockwise is the direction (CW), and shows you where the holes are in the grill - what could be easier, no need for SCI.CRYPT at all.



Adventurous treasure hunters visited Leinster Gardens, saw that there was a hotel called Henry VIII and decided that since he was Defender of the Faith and page 12 stated "... if you find yourself alongside the Defender of the Faith then you really have reached a brickwall and had better think again" that they had wasted their time. Well in the context of the Armchair Treasure Hunt they had. However, they failed to appreciate one of the wonders of Victorian (or was it Edwardian) engineering. The next hotel in the fine run of terrace frontage is The Blakemore. Two trees are planted just in front of the divide between the two hotels. Close inspection reveals that the terrace frontage between the two hotels is in fact a solid brick wall for four stories with painted windows and doors (30). The underground goes under the road at this point and the builders continued the terrace rather than leave a gap, however there is nothing behind it. The two trees draw the eye away from the frontage and most people never even notice.

#### Miscellaneous

The following **grid references** were placed to draw attention away from the abacus on page 8. They like the arcs on page 1 were complete red herrings and had no meaning at all - except that we thought they might just encourage a nocturnal visit.

Page 2, the roman numerals decode to **165843**, **Horsendon Hill** (12). Page 4, the deaf hand signs decode to **075758**, **Heathrow Bus Station** (23). Page 6 the base 8 number decodes to **977032**, **Lye Green** (12).

The lottery numbers on page 12 were 20, 21, 22, 31, 33, 43. If these numbers are used as displacements into the list of initials of team members the following is revealed, ANO MUG DOS THE LOT TRY. Or **Another mug does the lottery** (28). This is about the only issue on which the team (or at least some of it) is in agreement with Margaret Thatcher.

# **Answers to the Questions**

1. A goat is enclosed in a 2 "pi" acre fenced area in the shape of an equilateral triangle. It is tethered to a post at one of the triangle's vertices. To the nearest foot, determine the length of rope needed to allow the goat to eat only one-half of the grass in these 2 "pi" acres.

511 feet. (11)

**2.** How can a circular field of area 2 "pi" acres be divided into four equal parts by three fences, each of the same length? Please draw a diagram to illustrate your answer.

We were looking for a split as shown but in fact there are multiple solutions. In the margin we have recorded a few of the other accepted solutions. (7)

**3.** A farmer has a circular field of area 2 "pi" acres. His goat is tied to a post on the circumference of the field. To the nearest foot determine how long should the rope be so that the goat can only graze half the area of the field?

242. (20)

**4.** How do you spell the name of the town which is pronounced "Razebry"?

The answer we wanted here was Wyardisbury. Unfortunately, our source was rather out of date and the town in question, having presumably got fed up with people getting its name wrong, now calls itself Wraysbury, so we have treated both answers as correct. (W7)

**5.** There are three grapefruits on a flat counter in a green-grocer's shop, each one touching the other two, and underneath them is an orange (touching all three grapefruit). The radius of each grapefruit is 3 inches. What is the radius of the orange?

1 inch is the answer we were looking for. Unfortunately we missed the text in italics from the question so also accepted 1 inch or less. See p.35 of Gardner "Mathematical Circus" for details. (13)

**6.** Where does Stephen Blackpool appear?

In the novel "Hard Times" by Charles Dickens. (H 7)

7. Who said of whom "He was so mean it hurt him to go to the bathroom"?

Britt Ekland of Rod Stewart. We had lots of interesting answers for this, most involving either Bob Hope or Jack Benny or both, but no correct ones. (Source - The Guinness Dictionary of Poisonous Quotes.) (*E 30*)

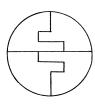
**8.** In which year did the swan start swimming the other way?

We were thinking of Swan Vestas here, in which case the answer would have been 1959. From 1883 until 1959 the swan on the Swan Vesta match box swam from right to left and was swimming off the box. In 1959 the design was modernised and the swan was displayed swimming into the centre of the box, i.e. left to right. It was thought that "It is always psychologically better to have people or animals looking inward to the rest of the picture". By the 1990s the thinking was that the swan was not so important and it was reduced in size. (27)

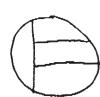












However, an equally good answer was provided by two other teams, relating to the Western Australian flag, which also features a swan. In 1953 the direction of the swan was reversed to conform to the vexillological guideline that animals on a flag should face the hoist. This information can be found on the Net.

Lots of people thought it might be Swan Vestas, but wouldn't commit themselves to a date or got it wrong and so didn't score, but points were given for 1959 and 1953. Jonathon Clarke thought it had something to do with the all-male *corps de ballet* in a recent production of "Swan Lake" but that was too subtle for us.

**9.** Who described a painting as "flinging a pot of paint in the public's face"?

Ruskin of "The Falling Rocket" or possibly "Nocturne in Black and Gold". Both were painted by Whistler and exhibited at the opening of the Grosvenor Gallery in 1877. (*R* 5)

10. Who laughed at John Scogan?

Edward IV. Scogan was his court jester - his japes are recorded in "The Geystes of Skoggan". (E 14)

11. What separates Keeler and Maxwell?

These are two of the gaps between different rings of Saturn. i.e. what separates them are the Rings of Saturn. Anyone who referred to the Rings of Saturn scored on this one, even if they were more precise than we needed. (R17)

**12.** Who claimed she had found the decomposed remains of a snail in her bottle of ginger beer, as she sat in Mincella's cafe in Paisley?

Mrs Donoghue. The incident gave rise to a legal case which reached the House of Lords in 1932 and established the modern tort of negligence. Most teams got this, but lots of people don't realise that it was never actually proved that the snail existed at all - the case went to the House of Lords on the preliminary point of law as to whether the manufacturer would be liable if the facts were proved. (D 10)

**13.** If you add chivalry and amusement to the inquisitive younger son of a duke and a form of boating, what is the relevant fraction?

9/10. See "Gaudy Night" by Dorothy L. Sayers. The full quote is in Chapter 14, where Lord Peter Wimsey says to Harriet Vane; "Would you now prefer to be independent and take the pole? I admit it is better fun to punt than to be punted, and that a desire to have all the fun is nine-tenths of the law of chivalry". Various people realised that the "inquisitive younger son of a duke" must be Lord Peter Wimsey, but only the Shilson team and the Barden team could be bothered to read the books to find the answer. It was also in a dictionary of quotations which Jeanne was reading in a friend's loo, but presumably no-one found that. (28)

**14.** Who was born in Lichfield on 9 September 1752?

No one. In 1752, the Gregorian calendar was adopted in Great Britain and her dominions and, as a means of bringing dates into alignment with those in most of the rest of Europe, 2 September was followed immediately by 14th September, causing a good deal of public alarm and riots to the slogan of "Give us back our eleven days!" Most teams realised that this was a trick question and answered accordingly, but we did have suggestions of Fanny Burney and Doctor Johnson, among others. (N 15)

**15.** What name is given to the fear of imperfection?

Atelophobia. (A 8)

- **16.** A, G, C, \_, What is the vital missing letter and why?
- T. These are the DNA letters, corresponding to the four DNA bases adenine, guanine, cytosine and thymine. (T9)
- **17.** Who wrote the music for a ballet lasting less than five minutes and entitled "The Strolling Golliwog"?

Revueltas, a Mexican composer. The Spanish title is "El Renacuajo Paseador". He also wrote the music for another ballet called "The Wandering Tadpole". (Source - various musical dictionaries, including "Twentieth Century Composers".) Only one team got this, the favourite answer being Debussy, presumably because of his "Golliwog's Cakewalk", and, more imaginatively, The Golden Fools came up with Engelbert Humperdinck for some reason best known to themselves. (R 29)

**18.** Where did a prostitute advertise by having a portrait of herself, a heart and the outline of a foot pointing in her direction chiselled into the pavement?

Ephesus, in the Marble Way. We know there's one there, because three of us have seen it. There may also be one in the other places suggested, such as Pompeii or Herculaneum, but no-one gave any sources and we haven't been able to confirm any of them. (E23)

**19.** Who went there and back again?

We were looking for the answer of Bilbo Baggins - "There and Back Again" is the alternative title for "The Hobbit", but we also accepted the Hobbit. (B 9)

We did very much like the suggestion made by the Porter team, who said it could be Lord Belborough of Winkstead Hall, Chigley who travels on Bessie, the steam engine. They gave us their authority for this, which we'd like to share with you:

#### The Little Steam Engine

Time flies by when I'm the driver of a train
And I ride on the footplate there and back again
Under bridges over bridges to our destination
Puffing through the countryside there's so much to be seen.
Passengers waving as we steam through a station.
Stoke up fireman for the signal is at green.

Fortunately they also mentioned the Hobbit, so we didn't have to agonise over whether to award them points for their efforts. The "Salem's Lot" suggestion of the Grand Old Duke of York also appealed to us, but didn't qualify for points.

**20.** Who was the second Briton to climb the highest mountain in the British Empire?

The answer we were looking for here (although we didn't find it), was Noel Odell who climbed Nanda Devi, which is in India, with Harold Tilman. It isn't as high as K2 in Pakistan which most people went for, but it was climbed by Brits, (who were in fact the first to climb it), in 1936 when Britain still had an Empire, while the first Brits to climb K2 did so in 1986, by which time Pakistan had long ceased to be part of an Empire which had itself effectively ceased to exist. Only the Skelcher team noted this fact, but unfortunately they didn't follow it through. (0 30)

**21.** What is the smallest number that can be expressed as the sum of two different cubes?

1729, 10 and 9, and 12 and 1. The Golden Oldies came up with a nice anecdote on this one, and we quote:

"There's a story about the Indian mathematician Ramunujam who used to claim the numbers 1-10,000 were all his personal friends. During his, finally fatal, illness in England he was visited by a colleague called Littlewood, who had ridden in a cab No 1729 to Putney to visit Ramunjam, and remarked that the number was rather a dull one so hoped it was not an unfavourable omen. "No," Ramunjam replied, "it is a very interesting number. It is the smallest number expressible as a sum of two cubes in two different ways." The non-mathematical ones among us think that, if that was the best his friends could do by way of cheerful conversational gambits for some-one very ill in hospital, it's not surprising that Ramunjam died, probably of boredom. (12)

**22.** In which opera was the English National anthem sung as part of the celebrations surrounding the coronation of a French King?

"The Journey to Rheims" (or "Il Viaggio a Reims") by Rossini. (J 25)

**23.** Which famous French spy used to dress as a woman?

Chevalier d'Eon. He was an 18th century spy who gave his name to eonism, the mania of men for wearing women's clothes. We thought the question implied that the answer was a man, but had a few replies of Mata Hari and, on that basis, there could have been hundreds of correct answers. Mike Wood did make this point, but then didn't mention any names. (E 21)

**24.** Which poet was solicitor to the Woolwich Building Society?

Roy Fuller. We had not realised, until it was pointed out by the Golden Oldies, that Fuller had written a poem called "Savage Gold". That stuff seems to get everywhere! (F 15)

**25.** What is the old 73 Cheapside now?

It is a flower bed. The building on that site was the residence of the Mayor of London in 1668. In the 1920's the building was demolished. However the City corporation kept the dismantled facade in storage and in 1975 some imaginative town planners in the pretty Kent village resort of St. Margaret's-at-Cliffe turned it into a grand municipal flower bed in the Pines Gardens at St. Margaret's Bay. Only the Meats team got this (and we'd be interested to know what route they used). For the rest, we got some fascinating information about "Pret A Manger" and the original Christopher Wren staircase still, apparently, in the building. We were a bit surprised the "Pret A Manger" people didn't know anything about it because there was a large spread on the subject (including a photo of the facade as a flowerbed) in the Standard of 17 July 1996, which some-one must have drawn to their attention - perhaps that means their rate of staff turnover is even higher than Logica's. (F 29)

**26.** Who is the only Irishman in a Shakespeare play?

Captain Macmorris in "Henry V". (M 10)

**27.** What is the name of the lunar hare which represents initiation, death and resurrection?

This is a bit of a problem question. The answer was supposed to be Echidna (in aboriginal symbolism), our source being "An Illustrated Encyclopaedia of Traditional Symbols" by J.C. Cooper. We've been checking this out, since no-one got the right answer, and found that no other potential source seems to have heard of it either. However, none of the answers given seemed to include all the concepts of initiation, death and resurrection, so no marks for you and no marks for us. (E 30)

**28.** What collections can be found at the following: Hoar Croft Hall, Milton Manor House and Hoghton Tower?

The deliberate mistake here, which several of you noticed was that "Hoar Croft Hall" should have been

"Hoar Cross Hall". Fortunately, no-one seemed to be put off by this and several people got the right answer - Teapots. (Source - The 1988 County House Guide - Family Homes in the Historic Homes Association.) (*T 24*)

**29.** "I am a seven letter word. My 1,2,3,4 is short, my 3,2,7 may be long and my 4,3,5,6,7 may be late." What is this game called?

Logogriphs. A logogriph is a puzzle in which a mystery word goes through several transformations, some or all of its letters being rearranged to make several new words. Clues are given to each of the words. The answer to this particular logogriph is "curtain". Most people got "curtain" even if they didn't get "logogriph", but unfortunately they didn't get any points for that (L 25)

#### **30.** Who commissioned the Regent Three?

London Transport. Regent Three is the nickname given to the most popular design of London bus and comes from the name of the chassis "Regent Mark III". The nickname gave rise to the term RT by which the bus is normally known. Since its introduction in 1939 more than 7,000 were built, the last withdrawn from service in 1979 - a record the current Routemaster is unlikely to beat. We also accepted the answers of Frank Pick and Lord Ashfield, who were high-ranking officials of LT at the time, and London Passenger Transport Board.  $(L\ 21)$ 

**31.** What's the name given to the close-fitting trousers worn by cavalrymen?

The answer we were looking for was "overalls", which several teams got. Another popular answer was "breeches", but we are relying on the Oxford English Dictionary for our authority on this. Breeches may have been worn, but there is no indication that they were particularly close-fitting. (O 24)

**32.** Where would you find four stags and a dragon at the bottom, a squirrel in the middle and an eagle at the top?

Yggdrasil, the tree of the universe in Norse mythology. The dragon was called Nidhogg and, together with his cohorts of worms, he gnawed at the roots of the tree in an effort to destroy it which would cause the downfall of the gods. It was a pity that we forgot that the squirrel, Ratatosk, had featured in a previous ATH. This is another example of the difficulties caused by the Net. The original question had been "Where do norns live?" The answer would have been the same, (well we needed a Y), but on doing a last minute check, we discovered that this question was too easily answered by a straightforward search against "norns" on the Net. If we'd left it as it was we would at least have avoided giving an unfair advantage to ATH veterans. (Y 25)

**33.** Where do the following stirring words appear:

"Comrades - ye who have dared

First in the battle to strive and sorrow!

Scorned, spurned - nought have ye cared,

Raising your eyes to a wider tomorrow."

It comes in the third verse of "The March of The Women", written in 1911 and dedicated to The Women's Social and Political Union by Ethel Smyth, Mus. Doc. Most teams got this right, although we had one vote for the Communist Manifesto from the Meats team. This was probably because the Ilford Public Library was evacuated because of a bomb scare when the research was being done. The team suspect sabotage by The Golden Oldies, not Karl Marx's ghost. (*T 18*)

- **34.** If 585 follows 375, what is 750?
- 18. These are the common control marks for 9, 14 and 18 carat gold showing their fineness in parts per thousand as laid down under the International Convention of Hallmarking introduced on 1 April 1975. Most

teams were thinking along the same lines as us but the Barden team referred us to a Bach opus, Herr Jesu Christ Liebes Licht. (25)

**35.** What is the award for mystery fiction - the equivalent of an "Oscar" - called?

The answer is an "Edgar", although we had lots of Golden and Silver Daggers mentioned. These are not, however, analogous to "Oscars" for various reasons which the teams who got it right were kind enough to point out to us. (E 17)

**36.** What was introduced to the court of Kaiser Rudolf II in Vienna between 1605 and 1610?

A Dodo. (Source - Grzimek's Animal Life Encyclopedia.) We had lots of different answers, but none of them as interesting as ours. Some of them, such as The Letter of Majesty which established freedom of conscience, undoubtedly happened in Vienna around that time, but we felt they could not be said to have been introduced **to the court**, and so disallowed them. (D 30)

**37.** Where was Ralph the Rover wrecked, having been hoist with his own petard?

Inchcape Rock. It was dangerous to navigation and was marked by a buoy with a bell on to warn sailors. Ralph the Rover removed the bell and was wrecked on the rock on his return journey. The story was told by Southey in his poem entitled "The Inchcape Rock". Various people suggested The Coral Island, but, although the narrator in this book was known as Ralph Rover and he was ship-wrecked, he doesn't seem to have been near Inchcape Rock, nor done anything to contribute to his own downfall. (*I* 15)

**38.** Who inherited Gracedieu Abbey from Sir Anthony Abinger?

Joan Shirley in the Abbey School books by Elsie J. Oxenham. We were bemused to find the The Wild Boys were the only ones to get this right - signs of a mis-spent youth? One other answer which intrigued us was from the Barden team who had apparently spoken to the people at the Abbey and been told they had applied for a lottery grant. (S 29)

**39.** Who was the first woman to qualify as an FA linesperson?

Wendy Tomms. (T21)

**40.** What fire festival originally marked 24th Night?

Up-helly-aa. It is now celebrated, mainly in Scotland, on the last Tuesday in January and sounds to be a right old knees-up, but was originally held on 18 January, allowing for changes in the calendar, of course. (U 19)

**41.** What did George Wander invent?

Ovaltine (1904). (O 17)

**42.** What is the main claim to fame of Fra Luca Pacioli?

He invented double-entry book-keeping or, at least, he published a book recommending it, asserting that it represented the best practice of local Italian traders. He also, as it happens, did some work on the Golden Mean which, understandably, given the overall theme, led some people astray. (D 15)

**43.** "To my daughter Leonora without whose never-failing sympathy and encouragement this book would have been finished in half the time." In which book does this dedication appear?

"The Heart of a Goof" by P. G. Wodehouse (1926). A traditional humorous dedication that has occurred many times since, and which may not have been original to Wodehouse in the first place. The dedicatee was actually his step-daughter. (*H* 13)

**44.** Where, according to legend, did a local mayor plant the first potatoes in Ireland?

Eochaill (Youghal), Sir Walter Raleigh was the Mayor 1588-9 and planted the potatoes in the grounds of his house, Myrtle Grove. (*E 21*)

**45.** Where was Oceanus Hopkins born?

On the "Mayflower" in 1620 (the only child to be born on it during the actual crossing). Unfortunately, according to the Frew team, he died when he was only 3 years old. (M 12)

**46.** What connects the following: George Sinclair, Dora Penny, Hew Steuart-Powell and August Jaeger?

"The Enigma Variations". They were all friends of Elgar who were depicted in the Variations and to whom the Variations were dedicated. Again, another unintended bonus for ATH veterans, since a variation of this question has appeared before, provoking some people to accuse us of plagiarism (not the way to win a prize for the wittiest answer!)  $(E\ 10)$ 

**47.** Who featured in "The King and I", "West Side Story, and "My Fair Lady", but was never seen?

Marni Nixon. She "ghosted" the singing voices of Deborah Kerr, Natalie Wood and Audrey Hepburn, respectively. (N 8)

**48.** Who finished Big George's picture of the slumbering Goddess of Love?

Titian. He finished Giorgione's Sleeping Venus. Giorgione means Big George - his real name was Giorgio. (*T* 22)

**49.** Which R&B star died during a concert interval while playing Russian roulette?

Johnny Ace, in Houston, Texas, 1954. (A 18)

**50.** What connects the drowning of a witch with an English battle?

Long Marston. What is thought to have been the last witch drowning in England, (after the witchcraft laws had been repealed) took place at Long Marston, Hertfordshire and the Battle of Marston Moor was fought at Long Marston, Yorkshire. (L 29)

**51.** What have Edward Dennis, James Botting and William Marwood in common?

They were all public hangmen, for the periods 1771-86, 1817-20, 1874-83 respectively. We also accepted "executioners", etc.(*H 17*)

**52.** What was designed in 1914 but first flew in 1920?

The current Olympic flag. Other suggestions included the Hammer & Sickle and the Tiger Moth. (O 24)

**53.** Where would you find the 5 Ks?

On a Sikh Man. They are:
Kesh - uncut hair and beard
Kachh - short boxer pants
Kara - iron bangle
Kanga - wooden comb
Kirpan (or khanda) - dagger (S 14)

(spellings vary, depending on the source).

Two teams suggested you would find them in a packet of Marlboro cigarettes, but didn't give any explanation and none of us was prepared to buy a packet to test the theory, so they lost out.

**54.** Which MP was reported in the Times as having ended his speech in the House of Commons with the statement that he felt inclined for a bit of  $f^{***}ing$ ?

Sir William Harcourt, the Attorney General, on 13 January 1882. He did not in fact say it; the words were added by someone in the "Times" print room but it was never discovered who was responsible for doctoring the report. In fact the added sentence, as pointed out by Mark Amey, was "The speaker then said he felt inclined......" and because this doesn't fit in very well, syntactically speaking, with the rest of the speech, it is not quite clear who was supposed to be feeling what. Many people thought it was more recent and suggested Harvey Proctor, David Mellor, Paul Boateng or Rupert Allason. (H 25)

**55.** When was Bicester's last slip?

9 September 1960 at Bicester. Up until this date there was a practice on the railways whereby an express train would cast adrift (slip) a few carriages as it approached a station. The express would continue through the station at speed and a guard would use a brake to bring the carriages to a smooth halt at the station! (27)

**56.** Which Peasants' Revolt was aimed at establishing a "Heavenly Kingdom of Great Peace"?

Taiping rebellion (1851-64) which involved several provinces in China and was finally suppressed with the help of foreigners, including General Gordon. (*T 17*)

**57.** When the lady lived in the Rocky Mountains, who was her dear desperado?

Jim Nugent. The "lady" was Isabella Bird, an intrepid nineteenth century traveller who climbed up Longs Peak in Estes Park in 1873 and wrote an account of her trip called "A Lady's Life in the Rocky Mountains". Those people who used the Net as their sole reference material came up with the answer of "Mountain Jim". We have been very kind and accepted this, even though his nick-name as given in the book was "Rocky Mountain Jim", but of course it didn't help in deciphering the sentence - serves them right! (*N* 25)

**58.** Tahar Ben Jelloun, Jean Vautrin, Jean Rouault: who's missing?

Erik Orsenna. They were all winners of the Prix Goncourt, TBJ 1987, JV 1989, JR 1990, EO 1988. (O 17)

**59.** Which composer died as a result of striking his big toe with his conducting baton?

Jeanne Baptiste Lully (or Lulli), who was a leading musician at the court of Louis XIV. While conducting a Te Deum for the recovery of the King from illness in 1687, he struck his foot with his conducting baton - in those days, conductors usually beat time on the floor with a long pole - which led to the formation of an abscess on his big toe. Always a contrary fellow, Lully spurned the advice of his doctors to have the toe amputated and died of gangrene shortly afterwards.  $(L\ 10)$ 

**60.** What do Steingrimur Hermannson, Paul Keating, Bibi Netanyahu, and Andreas Papandreou have in common?

Air Hostesses. Hermannson, the former PM of Iceland married Edda, a stewardess with Icelandair, Keating PM of Australia married Annita of Alitalia, Netanyahu of Israel is married to Sara formerly of El Al and Papandreou of Greece spent his last years with Dimitra of Olympic Airways. Some teams merely pointed out that they are, or were, all prime ministers but this, although true, is much too obvious to justify any points in the ATH. (A 20)

**61.** Bursley, Hanbridge, Knype, Longshaw, \_\_\_\_\_. What is missing?

Turnhill. They are Arnold Bennett's fictitious "Five Towns". (T 11)

**62.** Which festival is held in commemoration of the alleged "discovery of the cross" by agents of the mother of the Emperor Constantine?

The "Invention of the Cross". This is the name given to the main festival held on 3 May, but we have also given points for "Holy Cross Day" which falls in September and celebrates the finding of the cross as well as its return to Jerusalem. We also accepted "Santacruzan" from the Frew team. This is held in the Philippines and the procession includes a bearded Methuselah in a cart toasting grains of sand over a fire, Faith, Hope and Charity carrying symbols of their virtue (whatever they are), Judith holding aloft the head of Holofernes and Samaritana carrying a jug on her shoulders. Sounds like fun - the whole thing goes on for 9 days. (114)

**63.** Who has a small tool?

A fibrous plasterer or indeed any plasterer. The Golden Fools were kind enough to send us a picture of one which is available for viewing by appointment. (P 26)

**64.** What film was originally entitled "13" but had its name changed after one of the stars and one of the directors were forced out through accident and illness?

"Eye of the Devil" - made in 1968 starring Deborah Kerr, David Niven, Donald Pleasence and Sharon Tate, according to the Variety Movie Guide. Lots of imaginative answers to this, but no correct ones. (E 30)

**65.** Which is the odd one out and why?

That Great Charmer

The Death

Ram in Trade

Insane Anglo Warlord

Wild agitator, means well

They are all anagrams.

- Margaret Thatcher
- Ted Heath
- Martin Read
- Ronald Wilson Reagan
- William Ewart Gladstone

All are politicians apart from Read, who is not, and yes, for those in doubt, this was the Logica question. (*R* 8)

**66.** What was the name of the river stairs used by the Clerk of the Acts to the Navy Board on 5 August 1666?

Old Swan. The Clerk was Samuel Pepys. We have also accepted Westminster, but not the many other suggestions, either because he does not mention getting out there or because there is no evidence that he had to use river stairs there. (O 25)

**67.** In the days before the Board of Trade became a true Government Department it had one ex officio member who was not a politician. Who was he?

The Archbishop of Canterbury, heaven knows why. The suggestion of the Governor of the Bank of England by Gareth Hartwell makes more sense, but unfortunately isn't right. (A 22)

**68.** Who was Patient Zero?

Gaetan Dugas. He was an Air Canada steward and one of the first people to be diagnosed HIV positive. He became notorious by deliberately spreading the disease through unprotected sex. (D 12)

**69.** Who invented the bra?

The answer needed here for the purposed of the sentence was Otto Titzling (real or a spoof?), but we have also accepted other strong contenders, namely Cadolle, Crosby and Jacob. The prize for the best essay on this subject, if there had been one, would have been awarded to the Calboutin/Cornford/Walker team.  $(T\,10)$ 

**70.** What connects the following names: Diana, Cleone, Leonie, Prudence, Dominica, Mary and Judith?

Contrary to the Frew team's opinion, they are not all saints: they are all heroines in Georgette Heyer's historical novels. Diana was in the Black Moth (1921), Cleone in Powder and Patch (1923), Leonie in These Old Shades (1926), Prudence in The Masqueraders (1928), Dominica in Beauvallet (1929), Mary in Devil's Cub (1932) and Judith in Regency Buck (1935). We thought this would be a good question to enable mothers, aunts and grandmas to contribute, but unfortunately all you have to do is search against a few of these names on the Net and up pops the answer. It just didn't occur to us that there would be a Net feature listing all of GH's heroines, the books they appeared in and, for some reason, their rank and/or title prior to marriage. There also seems to be a similar article on her heroes, in case anyone is interested. (H 25)

71. Where did Operations "Blue Star" and "Black Thunder" take place?

The Golden Temple, Amritsar. The most interesting source we have found on this is Mark Tully's book "No Full Stops in India". (A 21)

**72.** Which is the odd one out of the following, and why? Shell, banner, fish, vase, knot, umbrella, turtle and wheel.

Turtle. Each of the others is one of the 8 Auspicious Signs revered by the Buddhists. The other is the lotus. The Canning team had the ingenious, but wrong, suggestion that it was the banner, on the basis that all the others had a connection with water. (T 26)

**73.** 25 was 1 of 10 in 35. Who was responsible?

"Twenty-Five" by Beverley Nichols was one of the first 10 Penguin books that appeared in July 1935. The Mills team was the only one to get this right. (N 29)

**74.** ONE = STOP TWO = GO

THREE = FULL FOUR = ????

Emergency. These were the recognised signals from conductor to driver on British buses and trams. ("Hold very tight, please. Ting! Ting!") Several people thought they were ship's engine room signals and that 4 was "astern" but no sources were given. It may well be correct, but we don't believe that, in the case of a ship, 3 would have meant "full" or 1 "stop". (E 21)

**75.** Who said "One picture is worth more than a thousand words"?

Frederick R. Barnard in "Printers Ink", 1927. In fact according to some sources, he said "One picture is worth a thousand words", but most people got the message. Various teams claimed it was an old Chinese proverb, but we have been unable to find any confirmation, and it seems intrinsically unlikely since we believe Chinese characters consist of stylised pictures anyway. (B 22)

**76.** Who's missing: Jacobsen, Ahm, Jacobsen, Ahm, Ussing, Varner, Varner?

Devlin. They were All-England Badminton Ladies Singles Champions, 1949-56 respectively. (D 26)

77. What connects Gigliola Cinquetti and Toto Cotugno?

They each won the Eurovision Song Contest for Italy (the only times Italy has won) in 1964 and 1992 respectively. (*E 16*)

78. What are Winton, Petriburg and Roffen?

Signatures of bishops, Winchester, Peterborough and Rochester respectively, although we have also accepted the answer of "bishops" or "bishoprics". We did not, however, accept "lorries" from The Wild Boys or "cars" from Roger & Irene & Allister and the Pettys. (S 22)

**79.** Which Sultan, at different times, was a Christian, Buddhist and Muslim and attempted to establish a world court?

Oljeitu Khan (ruled 1304-16. 5th successor to Genghis Khan.) (O 30)

**80.** How might Aretha clash with Marvin?

Levis. Aretha Franklin, The Clash and Marvin Gaye have all featured in TV advertisements for Levis. Only the Gilbert team got this right - presumably the rest of you were wasting time surfing the Net when you could have been watching ITV, or was it Channel Four? (L29)

**81.** Who had a dog named Jack which was stuffed and placed in the Imperial War Museum after its death?

Edith Cavell. We imagine the staff at the Museum must have been really fed up with us. (C 22)

**82.** By what name is the "Hall of Arts and Sciences" now known?

The Royal Albert Hall (of Arts and Sciences). Either was accepted. (R 13)

**83.** What is 3rd out of time?

Epoch. This is the third category of the subdivisions of geological time: era/period/epoch/age. (E 30)

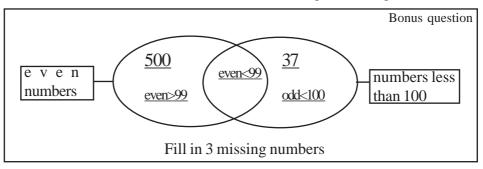
**84.** Where would you find a fly, a fox, three birds, and Sir Politic Would-be?

"Volpone" by Ben Jonson. (V 11)

**85.** Who are Medusa, Dragonia and Hecate?

Cinderella's ugly sisters in the children's opera of Cinderella by Peter Maxwell Davies. Judging by one team's answer its members have clearly had a recent run in with the Logica Human Resources Department. (U17)

**Bonus Question.** This was a very simple maths question from Bromley's "Key Stage 1 Mathematics Test 1996" (i.e. children aged 7). ATHer's collectively scored less than 40% on this one (19). However, do not be discouraged, the teachers did not understand it at the time. The issue of acceptable answers was reported in the *Times Educational Supplement* of June 21st, unfortunately they also got it wrong and had to publish a correction in the next issue. A range of valid answers exist as shown below - do not bother to contact us if we also have got it wrong!



**86.** What is the only edged tool that grows keener with use?

A sharp tongue, according to Washington Irving. (T 19)

**87.** What would you be playing if you won the MacRobertson International Shield?

Croquet. (C 12)

**88.** Where does God move in a mysterious way?

Olney, Bucks. "God moves in a mysterious way" is one of the Olney Hymns, composed/published in 1779 by John Newton and William Cowper. (O 25)

**89.** Die/dice, man/men are examples of irregular plurals in English. How many of them are there? And what are they?

There were a variety of answers to this one. The examples we gave are of what are sometimes called **mutative** plurals, (to distinguish them from other kinds of irregular plurals), of which there are 10 in common use. We awarded points to people who got all of these, regardless of whether they also added some others. They are: die/dice, man/men, woman/women, mouse/mice, louse/lice, child/children, ox/oxen, foot/feet, tooth/teeth and goose/geese. (23)

**90.** What were once called Hanways?

Umbrellas (U 17)

**91.** What links the Arun, Severn and Trent to the Atlantic?

Lifeboats. They are all classes of lifeboats that have been used or are in use by the RNLI. (L 22)

**92.** Where did Captain Hosken end up after having been led astray by an iron hull?

On the sands of Dundrum Bay beneath the Mountains of Mourne in Northern Ireland. He was the captain of I.K.Brunel's huge iron-hulled, screw-propulsion, cross-Atlantic steamship, the "Great Britain". The error occurred largely because the huge amount of iron in the hull distorted the operation of the ship's compass. After this incident, the compass was mounted at the head of the mast of an iron-hulled ship and was viewed through a periscope. (D 17)

**93.** Who wrote to whom "Home in three days so don't wash"?

Napoleon to Josephine. (N 12)

**94.** Who described himself as Rex Anglorum?

Another difficult one. The answer we were looking for was Offa, but clearly he was not the only one. In an attempt to be objective we have given points to every team which gave a name which appears in the DNB with the description of "Rex Anglorum" or "King of the English". (O 21)

**95.** If a "dewdrop" is a compliment, a "Collins" is a thank you letter for hospitality and a "spike" is an insult, what is a "dentist"?

A tête-à-tête. These expressions are all examples of upper class slang used in the early part of the century, as used, for example by Lady Cynthia Asquith in her diaries for the period 1915-18. The Frew team came closest by realising that they were slang terms from the 1910-1915 period. (*T 30*)

**96.** Who was the first person to throw a custard pie in a film?

Mabel Normand. She threw one at Fatty Arbuckle in the film "A Noise from the Deep" in 1913. (N 23)

**97.** Which No. 1 hit was inspired by a homicidal rampage?

"I Don't Like Mondays" - The Boomtown Rats. (13)

**98.** Which dominion mounted a rebellion to fight against independence?

Anguilla. In 1967 they rebelled against the idea of independence, so we, completely misunderstanding the situation, sent in the paratroopers to put down the rebellion. According to The Golden Oldies, this set a precedent for future English cricket teams - presumably there's some logic there somewhere? Perhaps that they never seem to know what they're supposed to be doing. In fact, as pointed out by the Skelcher team, Anguilla wasn't a dominion, merely part of a colony. Anyone who can prove that they were misled by this error, and failed to get the right answer as a result, should contact us - we will be very sympathetic. (The Skelcher team was OK, because they did mention Anguilla, so they don't need to enter a protest!) (A 25).

On the web there is an interesting history of rebellions on the island at: http://galaxy.cau.edu/Anguilla/History/english\_heaven.html **99.** Who was the only man ever to enter the British army as a private and rise to the rank of field marshal?

Sir William Robertson (joined 1877 and retired in 1918). We have been unable to find any support for the alternative suggestions. W.J. Slim, who was suggested by a couple of people, with Encarta mentioned in support, did become a field marshall, but we couldn't find confirmation that he began as a private. (*R* 19)

**100.** What was the Great Game otherwise known as?

The "Tournament of Shadows". The struggle between imperialist British India and Czarist Russia to control the lawless lands between them was known as the Great Game by the British and the Tournament of Shadows by the Russians. Many teams were led astray by Kipling or by "Kim" as cited in the OED, to think it was just another word for spying. (T 29)

**101.** What comes from Auyan-Tepui?

The Angel Falls, the world's highest waterfall. Water "plunges from the lip of the Auyan-Tepui plateau in the Guiana Highlands - bouncing only once, on a ledge" (Venezuela). (A 12)

**102.** What type of clothing was banned by statute in 1746?

Highland Dress - it was prohibited after the Jacobite Uprising of 1745. We also accepted variations such as "kilt" and "tartan". (H 8)

103. What was invented by Roger Staughton and Ben Carson?

CS gas which is in fact not a gas but a white crystalline solid first synthesised by Carson and Staughton in 1928. More appealing alternatives included ice cream, the juke box and Trivial Pursuit and we also had several references to separating Siamese twins. (C25)

**104.** What was otherwise known as The Islands of the Blest, the White Island, the Green Island and the Island of Jewels?

Thule - which is the hyperborean, primordial spiritual centre, the "point quiescent", the meeting of heaven and earth. Also known as Paradise and Avalon. (T 30)

**105.** The first film to get an X certificate from the British Board of Film Censors was the Frenchmade "Life Begins Tomorrow" ("La Vie Commence Demain") in 1951. Why did it received an X?

It had a sequence showing artificial insemination. (A 19)

**106.** Who, too, was here?

Jane Welsh Carlyle, the wife of the more famous Thomas. A collection of her letters, for which she was famous, has been published in eight volumes (so far) under the title "I Too Am Here". This was obviously much too esoteric - most teams answered "Kilroy". This was clearly wrong, because it gives no meaning to the "too". Much better was the Mills team's answer of "Kilroy's elder brother" which at least made sense and replicated the sentiment behind the original title. Jeanne, who was responsible for this question, wanted to give them points for this, but wasn't allowed to. We're still pondering over the answer of "Genesis P. Orridge (1993)" from Roger & Irene & Allister. (*C 30*)

# The Supplementary Clue Sheet

Map symbols for road, rail and canal. i.e. unique place in UK and possibly the universe (Three Bridges in Southall).

Unintentional misprint.

The gaps spell ETAONRISH.—

Moneybury Hill.

The Chinese symbol for *suan*, "calculate", it shows an abacus held below by the symbol for "hands" and with the symbol for "bamboo" above the abacus.

The foot bridge was built as a memorial to this chap and there is a plaque on the bridge.

Map symbol for foot bridge.

Treating page 8 as a map to the treasure this is the scale,

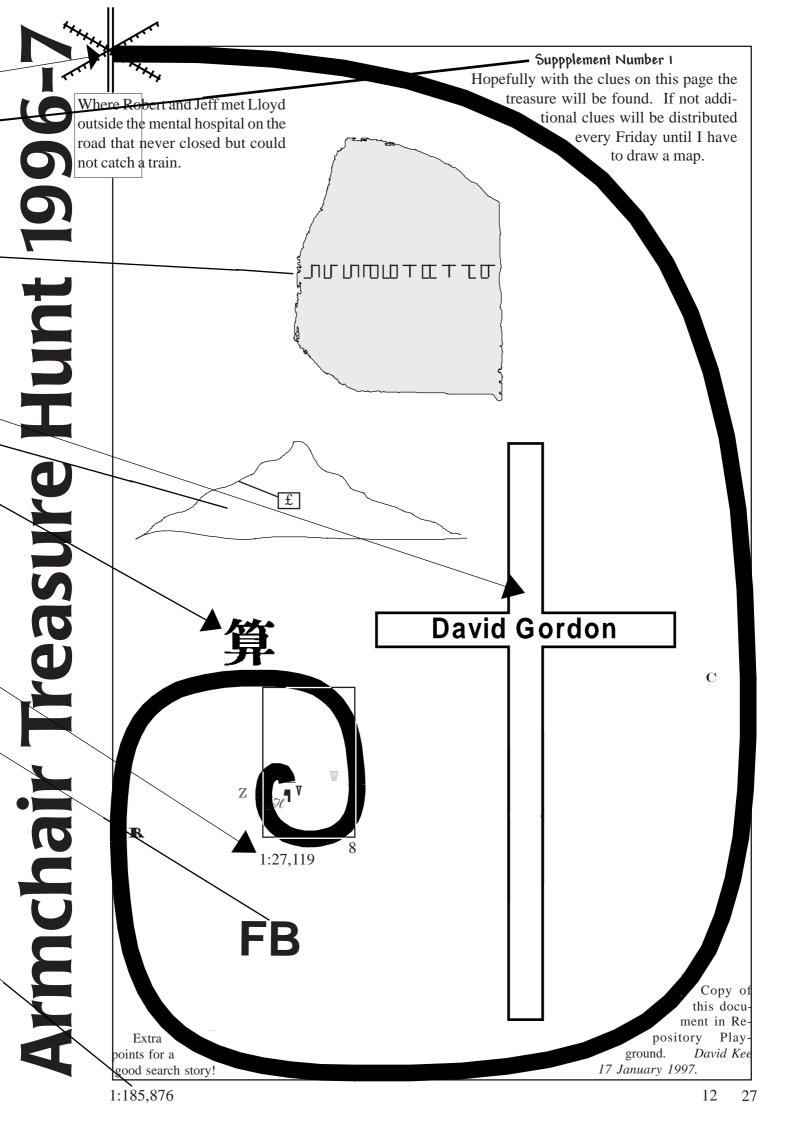
Treating page 12 as a map to the treasure this is the scale.

## The Sentence

The sentence is constructed by taking the first significant letter of each answer, ignoring those with numeric answers and reading alternately from left to right as each page boundary is crossed (i.e. boustrophedon). The sentence decodes to:

Where Robert and Jeff met Lloyd outside the mental hospital on the road that never closed but could not catch a train. (30)

- Robert Bridges, Jeff Bridges and Lloyd Bridges are a pointer to Three Bridges.
- Three Bridges is outside a mental institution (formerly St Bernards, not Dave Kee's house as one team suggested).
- Three Bridges is on Windmill Lane (the Windmill in Soho had a reputation for never closing).
- Three Bridges does not have a station so no train can be caught.



## War Stories from the Entrants

#### ATH - A sorry tale or why you should never wait for the mathematicians!

We all eagerly awaited the additional clue page for the ATH last Friday (in the vain hope that it would be easier than the actual quiz had been.) This of course was not so, but anyway we got together and went through our thoughts on the additional clues. We were pretty sure that the treasure was on the Chilterns Hills North map and probably had something to do with canals. Various team members went off to work on the maths, Chinese symbol and the infamous code. This left the rest of us scouring the map for a canal, bridge and road intersection from which to start out to find the Treasure. Whilst I was perusing the map my eye caught on "Moneybury Hill", "that's the sort of place Dave would think of burying the treasure, it's a good name and it's by the Bridgewater Monument, which was erected to the Duke of Bridgewater, who built canals, so it could be the ancient monument from where we are supposed to start" I said.

Later on that afternoon I tried to get hold of another copy of the map (as we only had one and this was needed for mathematical purposes), but neither Dillons or Books Etc. had a copy. So I went to the Logica Finance Ball and decided to wait to see if the others could come up with something else which would support my theory.

In the meantime we worked out where the start location was and the team got working on the maths to determine the treasure location.

Later on the next week I was in British Airways so decided to have a look another look at the map. I then noticed that there was a footbridge (FB) just to the south of Moneybury Hill, roughly like on the additional clue sheet. I felt sure that this was the place and e-mailed my fellow team members to say that I intended to go to Moneybury Hill this weekend just so that I felt I had given it a shot and therefore would not be absolutely livid when I found out that the treasure was where I thought it was! As we all know I didn't go and the rest is history.......

Oh, well I suppose the moral of this sad tale is always stick to your hunches and that maths always gets in the way.

Cheers

Gillian

#### **Brian Mills Writes....**

#### 1. Chicken Pox

The hunt was started, as is traditional, with a team gathering at Hunt Base G the first weekend after the clues came out. With much to eat and drink the time devoted to hunting was fairly limited but these things usually get off to a slow start. Early progress was further disrupted by

a bout of chicken pox which required team members to be divided into two groups - those who have/have had or want to have chicken pox and those who haven't had it and don't want it.

#### 2. A Sign

We keep answers to questions and codes in a spreadsheet. This makes it easier to keep all the team up to date and also gives the computer a chance to chip in with answers if it feels like it. This doesn't often happen but against the "8:51\*(6)4" code we found it had written "Gold Bug". At least no one in the team would admit to having typed it in. And the PC was glowing in a strange, ghostly fashion. A sign! It must be a sign!

#### 3. Deluge

Migrating to Hunt Base S for the New Year celebration, we arrived to discover a large hole in the ceiling with water pouring through and a rather sad looking Christmas tree floating towards the video. With lounge knee-deep in water we had to reestablish Hunt mission control in the study where, crammed round a hastily constructed LAN we searched for lottery numbers on the net.

#### 4. Another Sign

Risking life and limb to wade across the lounge and retrieve another reference book from the bookcase, Sarah tripped on a submerged Christmas pudding and the book fell open on a page with David Livingstone staring up at us. And if by magic the floodwater began to subside.

#### 5. Chiltern Hills North

With enthusiasm renewed following the issue of the additional clues, we reconvened at Hunt Base W armed with a copy of the recently discovered "Chiltern Hills North" OS map. Fitting page 8 upside down onto this map at 1:27118 scale gave us a point for the treasure near the Bridgewater Monument in Ashridge Park. "FB" and Moneybury Hill on the map seemed to be good further clues, but we couldn't make much sense of "David Gordon" and didn't think we had enough information to pinpoint the treasure. Nevertheless, since it was dark and foggy and hence traditional weather for treasure hunting, we decided to take a look anyway. The map seemed to suggest that the treasure was somewhere between the footbridge and a tumulus but an hour of searching with a dimming torch failed to turn up anything.

#### 6. Angela's Map

After an exhaustive search of road/rail/canal crossings in West London, eventually found a map (at Hunt Base H) naming such a combination as "Three Bridges", near Southall - suspiciously close to Dave Kee's home. So with enthusiasm renewed again, recalculated the treasure location from this starting point, which provided more reliable confirmation that the Moneybury Hill area was the right place, and decided to take a further look, this time in daylight.

On Sunday then, the last possible day for hunting, we set out to scour the area we'd

already covered. It was a bit difficult to cope with the concept of treasure hunting with the sun shining.

The place was absolutely swarming with Hertfordshire Man (similar in most respects to Essex Man) out exercising with brood in tow. The inscription on the Bridgewater Monument is quite obvious when it's not foggy - it says all sorts of naff stuff about Francis Bridgewater: FB - aargh is this another red herring?

And so we came to said footbridge and discovered a plaque on it - "In memory of David Gordon - Engineer (1944-1994)". How did we miss that?

So a more thorough search underneath the bridge was clearly in order. Quite quickly found Logica L made out of staples on one of the beams. "The treasure is underneath"? No obvious sign in the dirt below, but instead found it hidden between the cross-pieces just next to the L.

#### The Golden Oldies Write...

Doubtless you were relieved to hear of our success yesterday. We are now proud holders of ticket No. 1 and an Egyptian banknote (not acceptable in The Greyhound Inn nearby, as we discovered).

("... box contains £s, not quite the treasure of the Pharaohs but double figures nevertheless." The box actually contained a £10 Egyptian banknote.)

There are still many things we don't understand - doubtless we will have to wait for the answers. What intrigues us most at present is the order in which you did things. Assuming that you spotted the Three Bridges as a good starting point you were then limited to places a certain x,y ratio away, as determined by the Fibonacci spiral. So was it then a coincidence that you found Moneybury Hill? Or did you do it the other way round?

Anyway, I'm glad it's all over. If that's how difficult you think ATHs should be then you've had a easy time of it so far - and will do again this year.

Incidentally, I was wrongly credited with leading our team last year. Dave Harding is instigator, motivator and slave-driver, while most of the questions, codes and clues were answered by Matt Hulbert of Reuters. I act in a Dr Watson role.

Pablo

# **Prize Winners and Placings**

Golden Oldies	2210 first team to treasure
Brian Mills	2027 best overall solution
Ros Skelcher	1603 second best overall solution
Roslaind Barden	1556 arts and sciences
Alison Ruxton	1489 prime code breaker
Ken Shilson	1278 wittiest set of answers
The Wild boys	1201
Mark Amey	1179
Ian Canning	1179
Lydia Frew	1157
Roger, Irene and Allister	794
Golden fools	773
Steve Hames	701
Meats	683
Martin Milnes	613 most red herrings
Richard Porter	605
Peter DG Smith	578
Rod Fine	545
Vitesse	480 best solution by ATH virgin
Wendy Petty	412
Robin Gilbert	380
Gareth Hartnell	311
Mike Wood	251
Chris Jones	231
Jonathan Clarke	206 closest to 200 points
Andrew Hendry	189
Salem's Lot	156
Oxley/Tilly	119
Tony Ashton	84
•	

If you won a prize it is attached to your answers. You may note that the *second team to the treasure* prize has not been awarded. This is because the top two scoring teams were the only ones to find the treasure.

# **Errata**

We have decided to duck out of explaining the background to some of the fundamentals since we suspect that many of you have had all you can take about Fibonacci and his series. However, if you are still interested in some background surfing you might find the following pages useful.

#### Fibonacci and Golden rectangles

http://www.mcs.surrey.ac.uk/Personal/R.Knott/Fibonacci/fibnat.html#spiral

http://www.abilene.com/baacks/searching.html

http://www.mathsoft.com/asolve/constant/gold/gold.html

http://cosmopolis.com/inst/1996.html

#### **Ciphers**

http://www-math.cudenver.edu/~wcherowi/m5410/m5410cc.html

#### **Magic Eye**

http://www.softsource.com/softsource/tutorial.html http://www.cs.ut.ee/~janekh/sirds/general.html http://www.vision3d.com/views.html