

CONTENTS

Preface	7
---------------	---

PART 1 – THE BRAIN TEASERS

Section A: Teasers Involving Factoring of a Number

A1 - Eating Out	9
A2 - A Christmas Bonus	9
A3 - A Walk in the Country	10

Section B: Teasers Involving Magic Squares

B1 - Two Non-standard Magic Squares	11
B2 - The Damaged Magic Square	12
B3 - Another Unusual Fifth Order Magic Square	13
B4 - The Sixteen Coloured Marbles	13

Section C: Teasers Involving One Unknown

C1 - Soccer Goals	14
C2 - Profit and Loss	15
C3 - Apples	15
C4 - Amusements by Train	16
C5 - Leon, the Big Spender	16
C6 - A Windfall from the Lottery	17
C7 - A Basket of Eggs	18
C8 - The Chicken Yolks	18
C9 - In the Street Where I Live	19
C10 - A Practice Run	20
C11 - The Reunion	21
C12 - Water Sports	21
C13 - A Small Business Transaction	22
C14 - A Trip to the Airport	23
C15 - A Soft Touch	23
C16 - A Matter of Pages for Lucy	24
C17 - Buying Some Writing Pads	24
C18 - The Length of a Street	25

Section D: Teasers Involving Two Unknowns

D1 - Leo's and Harry's Ages	26
D2 - Lucy's Teddy Bear	26
D3 - Assembly Hall	27
D4 - The Tennis Balls	27
D5 - Isaac's Roses	28
D6 - Marks in an English Exam	28
D7 - Oranges and Apples	29
D8 - Walking Uphill and Downhill	30
D9 - Throwing Two Dice	31
D10 - Give and Take	31
D11 - Watching the Fireworks	32
D12 - Jonathan's Bicycle	33
D13 - Lucy's Age	33
D14 - Bert's Car Trip	34
D15 - A Few Chess Games	34
D16 - A Race to the Top of the Incline and Back Again	35
D17 - Car Trouble	35

Section E: Teasers Involving More Than Two Unknowns

E1 - Anneliese's Photos	36
E2 - The Cats in Belgrave	37
E3 - The Rendezvous	38
E4 - The Local By-election	38
E5 - Some Poultry Business	39
E6 - Mothers and Daughters	40
E7 - To Work by Train or Bus	40

Section F: Teasers in Geometry

F1 - A Cross-country Run	41
F2 - An Unusual Bicycle Race	42
F3 - A Swimming Handicap	43
F4 - The Sliced Cube	43
F5 - The Damaged Chessboard and the Thirty-one Dominoes	44
F6 - The Seven Tennis Balls	44

F7	- Nine Circles	45
F8	- Moving Six Equal Round Coins into a Circle.....	46
F9	- Shrinking a 5 x 5 Square.....	47
F10	- Another Ten Counter Problem	48
F11	- Anna's Star of Marbles	48
F12	- The Spider and the Fly.....	49
F13	- An Unusual Round Trip.....	49

Section G: Miscellaneous Teasers

G1	- Twenty-one Matches.....	50
G2	- A Game with Twenty-three Matches.....	51
G3	- Lesley's Game.....	52
G4	- The Game of Number Reverses	52
G5	- The Game of Stars	53
G6	- A Love Story.....	54
G7	- Clock Business	55
G8	- The Legacy.....	55
G9	- A Test Run with a Difference	56
G10	- A Chain Letter	57
G11	- The Farmer and His Rooks	58
G12	- The Story of the Missing Dollar	58
G13	- A Magic Number of Eight Figures	59
G14	- Weighing Objects.....	59
G15	- Moving Ten Counters	60
G16	- Jonathan's Card Trick.....	60
G17	- Spotting the Counterfeit Dollar Coins.....	61
G18	- Visiting Two Girlfriends	62
G19	- Fooling around with Two Water Jugs.....	63
G20	- The Lost Pearls.....	63
G21	- The Man and the Pigeon	64
G22	- A Simple Card Trick to Baffle the Young.....	64
G23	- Dividing a Stable of Horses	65
G24	- Four Little Towers of Three.....	66
G25	- Fooling around with Four Vintage Port Bottles.....	66
G26	- Sharing out the Beer	67
G27	- Finding a Digit within a Certain Number.....	67

Section H: More Challenging Teasers

H1 - Predictable Additions.....	68
H2 - A Procession of Children.....	69
H3 - A Peculiar Distribution of Drinks.....	70
H4 - The Deleted Digit.....	70
H5 - Mixing Wine with Water.....	71
H6 - Number of Scholars in a Form.....	71
H7 - Big Day Out.....	72
H8 - Buying Pineapples.....	72
H9 - A Card Trick.....	73
H10 - A Parlour Trick.....	73
H11 - The Hole in the Sphere.....	74
H12 - A Certain Matter of Marbles.....	74
H13 - Russian Multiplication.....	75
H14 - Sharing out the Cider.....	76
H15 - Theo's Financial Affairs.....	76
H16 - The Oak Tree.....	77

PART 2 – HINTS

Section A.....	79
Section B.....	79
Section C.....	80
Section D.....	83
Section E.....	87
Section F.....	88
Section G.....	91

PART 3 – SOLUTIONS

Section A.....	97
Section B.....	98
Section C.....	100
Section D.....	105
Section E.....	112
Section F.....	115
Section G.....	120
Section H.....	130