Dudeney's puzzles and perplexities in The Strand Magazine

His columns entitled Perplexities ran monthly from May 1910 through June 1930,
and had numbered problems. Here I call them X1, X2, ..., retaining the
original numbering and the original problem titles. (X for perpleXity.)

He also contributed several longer articles with (usually) unnumbered problems;
for example, he presented special puzzles every year at Christmas time, from
1908 to 1929. These are given numbers like Z12.3 here, meaning the third puzzle
in 1912. (Z for puZzle.)

A notation like "36(08)779-787" means volume 36 (1908), pages 779--787.
The Strand also published an American edition, one month later, with
different paging; I use the British volume/page numbers here, unless the
letters US appear.

The symbol * stands for an algebra problem that I decline to specify further

I have not indexed Dudeney's other (non-puzzle) contributions to Strand,
but I might as well list them here: 13(97)50-55 "Dr. Bernard's Patient"
(a short story); 45(13)388-392, "The Antiquity of Modern Inventions";
47(14)91-95, "Jose Capablanca: The Latest Chess Genius"; 75(28)92-93,
"Napoleon as a Chess Player". A short story by his wife, Alice Dudeney,
appeared in 60(20)396-403, "The Legacy". A profile by Fenn Sherie,
"The Puzzle King: An Interview With Henry E. Dudeney," appeared in
71(26)398-404 and mentioned several of his most famous puzzles, with
solutions. (Except for the solution to P514, the classical probl\`eme
des m\'enages, of which he says he "tried to worry that out for
several months" without success until a method flashed into his mind
while listening to a performance of `Siegfried'! He was later to discuss
this problem on page 76 of Amusements in Mathematics.)

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+12(96)720-726 The Professor's Puzzles; solutions 13(97)106-109.
[A condensed form of this article appeared in his book The Canterbury
Puzzles, pages 81--88 and puzzles CP67--72 (of the first edition, 1907).
The original article also contained P12 and P84 from the Weekly Dispatch,
and one curious further puzzle that I haven't seen elsewhere:
Z96.1 Six little niggers: Find a sequence of the 14 rows/cols/diags of 6x6
so that the elements of adjacent lines are simultaneous queen moves apart,
having one common point.

+35(08)339-344 Puzzles from Games
Z08.1 The forsaken king: Start chess with all the white pieces but only the
 black king; white to move and mate in six
Z08.2 The amazons: Start with queens on c1,d1,e1,f1,g1,h1,h2,h3; move three
 of them, leaving 11 squares unattacked
Z08.3 Queens and bishop puzzle: Put bishop in a2; add four queens so that
 all squares are occupied or attached ("rather a tough nut")
Z08.4 Ancient Chinese puzzle: white rooks on a6 and c6, white king on b6,
 black king on b8; white to play and mate moving each of the three pieces
 exactly once
Z08.5 Four puzzles in one (by Sam Loyd): given positions of white pieces,
 put black king so as to have mate in 0, stalemate, mate in 1, etc
Z08.6 The witches' dance (by Shinkman): black queens a3, b5, b7; white queens
 e4,f2,g8,h6; move one at a time in any order, never with two attacking;
 end with the white queens on left halfboard, black queens on right halfboard
Z08.7 The knights puzzle: 14 knights can cover the chessboard and each other;
 how many suffice if only the unoccupied cells need be attacked?
Z08.8 The rookery: Checkmate with 8 rooks confined to a 3x3 subboard till end
Z08.9 Checkmate!: retrograde chess
Z08.10 Thirty-six mates: Given the positions of 8 white pawns and 16 black
 pawns/pieces, place 8 white pieces so as to maximize the ways to mate in one
Z08.X Setting the board: How many ways to put chessman into initial positions?
Z08.11 Foxes and goose: Who wins in a checkers-like game?
Z08.12 Four-in-line puzzle: Arrange 10 counters in five lines of 4, all ways
Z08.13 The grasshopper's quadrille (by E Lucas): exchange 24 white with
 24 black in 7x7, fewest moves (no diagonal moves or captures)
Z08.14 Solitaire Muggins (by Sam Loyd): The maximum score at dominoes
 [he claims the solution 200 never before published, but he evidently
 forgot that he had published it in The Weekly Dispatch, 17 Feb 1901]
Z08.15 Domino magic square: Arrange 18 dominoes in 6x6, summing to 21 in
 each row/col/diag
Z08.16 Twenty-five-up (by Loyd): Analyze a game with rolling and turning dice
Z08.17 Central solitaire: Find solution to peg solitaire in 19 moves
Z08.18 Bachet's square: How many ways to put the court cards into 4x4 array
 with no two of same suit or rank in row/col/diag?
Z08.19 The thirty-one puzzle: Analyze a Nim-like game

+35(08)455-458 Solutions
SZ08.1 he says the first two white moves must be e4 and Qg4
SZ08.2 he says the solution (c1,c2,d1,g2,g3,h1,h2,h3 is unique, and claims that
 there's no way to leave 12 unattacked when 8 queens are present
SZ08.3 queens at c5,d3,e4,h8; possible uniqueness not discussed
SZ08.4 Rd6 Kc8; Ka7 Kc7; Rac6 mate
SZ08.5, SZ08.6, SZ08.7, SZ08.8, SZ08.9, SZ08.10
SZ08.X (8! 2! 2! 2!).(8! 2! 2! 2!).2
SZ08.11, SZ08.12, SZ08.13, SZ08.14, SZ08.15, SZ08.16, SZ08.17
SZ08.18 4!.4!.2, the factor 2 being omitted from Bachet editions
SZ08.19

+35(08)580-584 [US663-667] Some Much-Discussed Puzzles
(He talks about many old chestnuts, like the Josephus problem. "It is a curious
fact that the answers always given to some of the best-known puzzles that
appear in every little book of fireside recreations that has been published for
the last fifty or a hundred years are either quite unsatisfactory or clearly
wrong. Yet nobody ever seems to detect their faults.")
Z08.20 The sheep fold: Double the size of pen that has 50 hurdles, by
 adding the fewest new hurdles
Z08.21 The puzzle wall: Build shortest wall to separate four cottages from
 four mansions and a lake

+35(08)696 [US 36(08)107] Solutions
SZ08.20
SZ08.21 Swastika-like symmetry is inferior to an I-like configuration

+36(08)581-585 Tales with Tangrams [see AM 169]

+36(08)779-787 The World's Best Puzzles
He mentions the 6-piece burr puzzle (calling it `the ancient "Chinese Cross
Puzzle"') and Chinese Rings ('the ancient "Tiring Irons"), etc., and also
gives a few problems for readers to solve:
Z08.22 Ahmes' puzzle (more than 300 years old): Solve x + x/7 = 19
Z08.23 Papa's puzzle: center of gravity
Z08.24 Alcuin's puzzle: 100=3m+2w+c/2, m+w+c=100, integers m,w,c>0
Z08.25 Tartaglia's measuring puzzle: (24,0,0,0)->(8,8,8,0) with
 measures of sizes (24,13,11,5)
Z08.26 Bachet's weights: Four weights to weight 1, 2, ..., 40
Z08.27 Chinese ring puzzle: How many moves to remove seven "Tiring Irons"?
Z08.28 Bachet's wine bins: Fewer bottles although the sum per side remains
Z08.29 Kirkman's schoolgirls: 15 girls 3x5 on seven days, all pairs occur
Z08.30 Chessboard cover: with 3 queens, a rook, and a bishop
[He says the only known way to cover a chessboard with 4 queens and a
 knight was given in Strand, August 1907; he shows what he thinks is the
 only way to do it with three queens and two rooks, all pieces guarded]
Z08.31 The hat-peg puzzle: Find four adjacent 5-queen coverings of 8x8,
 starting with all in a column, ending with no two attacking
Z08.32 Three sheep puzzle: Like the 5 queens puzzle, but on a 4x4 board
Z08.33 Railway puzzle (circa 1888, author unknown): Interchange two
 railway cars on a small siding
Z08.34 The lost square: Explain the paradox of 5x5 dissected into 3x8
Z08.35 The mitre puzzle (1835 or earlier): Cut into four congruent parts
Z08.36 Tait's counter puzzle (P. G. Tait, 1884): abababab00 -> aaaabbbb00
Z08.37 Leapfrog puzzle: aaaa0bbbb -> bbb0aaaa
Z08.38 Heart puzzle: Detach string and bead from a wooden heart
Z08.39 Dovetailed joints: Explain how they can apparently be at right angles
Z08.40 Tower of Hanoi (Lucas): How many moves?
Z08.41 Newton's tree puzzle: He shows 9 points, 10 lines of 3; he asks for
 11 points in 16 lines of 3 (Wilkinson), 16 points, 15 lines of 4
 [Although ascribed to Newton, it's a special case of the theorem of Pappus]
Z08.42 Get off the earth (Loyd): Explain which Chinaman disappears
Z08.43 Chain puzzle (Loyd): Most economical way to mend a broken chain
Z08.44 Spider and the fly: Shortest wall-to-wall route in a certain box
Z08.45 Triangle and square: Dissect equilateral triangle into a square
Z08.46 Catching the mice: Josephus-like puzzle, with large count

+37(09)113-116 Solutions
SZ08.22, SZ08.12, SZ08.24, SZ08.25, SZ08.26
SZ08.27 `To solve a seven-ring "Tiring Irons" takes 85 moves (taking off or
 putting on a ring being a move), or 64 moves if we drop or put on the first
 two rings in one move.'
SZ08.28, SZ08.29 [with interesting symmetry], SZ08.30, SZ08.31
SZ08.32 states that there are 47 ways, but doesn't show them; AM310 shows them
SZ08.33, SZ08.34, SZ08.35, SZ08.36, SZ08.37, SZ08.38, SZ08.39, SZ08.40, SZ08.44
SZ08.41 is not given [see P179 and P388]
SZ08.42 "Mr Loyd has never, I believe, published his solution...", and Dudeney
 proceeds to explain it in great detail
SZ08.43, SZ08.45, SZ08.46

+37(09)442-448 Mazes and How to Thread Them [see AM, pages 127--137]

+38(09)82-87 The Best Puzzles With Coins
Z09.1 Five pennies equidistant: Make each of five touch all the others
Z09.2 Judging distances: Optical illusion
Z09.3 Coin trivia: On which side of a penny is the date?
Z09.4 Coin packing: How many pennies can surround another?
Z09.5 Coin stacking: How many thruppences fit on half a crown?
Z09.6 Elephant puzzle: Find an elephant on the old-style Victoria penny
Z09.7 Cross puzzle: In 2+2+6+6+2+2, how many subsets are corners of square?
Z09.8 Crossed puzzle: Remove six of those 20, leaving no such squares
 [is essentially Hoffmann's P6.27]
Z09.9 Square puzzle: Put 20 coins in square array, same number in row/col/diag
Z09.10 Magic coins: English coins in 3x3 making 15 shillings in row/col/diag
Z09.11 Even amounts: How many ways to put 6 pennies in 8x8, all row/col even
Z09.12 Pile problem: 1111111111111111 -> 4400000000000044, always pass over 4
Z09.13 Pile problem variation: End with ...4...444...
Z09.14 Another variation: End with 0040400000040400 (always in twelve moves)
Z09.15 Ten coin puzzle: Make 5 lines of 4, with 5 coins at top or bottom
Z09.16 Sharp's puzzle: [see AM page 230]
Z09.17 Plates and coins: cyclic 111111111111 -> ..2..2..2..2..2..2.. always
 passing over 2 as you circle the table; minimize distance traveled
Z09.18 Eight engines puzzle: Rearrange certain sliding blocks keeping one fixed
Z09.19 Eccentric deal: end with head,tail,head,tail,head,tail,head

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Z09.20 Eleven coins: Remove 5, add 4, leave 9 [just a trick of wording]
Z09.21 Making change: How many ways to change a farthing, ha'penny, ...sov'rn?
Z09.22 Giving change: A has 50+25, B has 100+3+2, C 10+10+5+2+1, B pays 34 to A
 [Equivalent to Hoffmann's 4.107]
Z09.23 Broken coins: [See AM29]
Z09.24 Five coin flips: What are odds of getting at least four heads or tails
Z09.25 Four coins in a bag: Expected value when {20,20,20,1} equally likely
Z09.26 Heap: A simple one-pile nim game
Z09.27 Sixpence under tumbler: A physics trick
Z09.28 Purse puzzle: Another trick of wording
[The American edition of Strand, published a month later, omitted problems
Z09.3, Z09.5, Z09.6, Z09.19, Z09.21, Z09.23, and Z09.25.]


+38(09)240-242 Solutions
SZ09.1, SZ09.2, SZ09.3, SZ09.4, SZ09.5 [only one!], SZ09.6,
SZ09.7 says 19, but he missed two of side \sqrt5; Strens collection copy
 has Dudeney's correction in his own hand
SZ09.8 Cover the following six:    00
                                    x0
                                  xx0000
                                  000xx0   [is there a better way?]
                                    00
                                    0x                      11101
SZ09.9 His solution 2111 [see TeXbook p335!]; he doesn't mention 01111
                    1121                                    11011
                    1112                                    11110
                    1211                                    10111
SZ09.10, SZ09.11, SZ09.12, SZ09.13, SZ09.14, SZ09.15, SZ09.16, SZ09.17, SZ09.18
SZ09.19, SZ09.20, SZ09.21, SZ09.22, SZ09.23, SZ09.24, SZ09.25, SZ09.26, SZ09.27
SZ09.28


+38(09)670-676 The Paradox Party [see AM, pages 137--141]


+39(10)US528, a note by HED at the end of the "Curiosities" page:
 "In our next issue will start a monthly page of Puzzles for the entertainment
  of our readers."
X0: The game of two rooks where you cannot pass any attacked square, cf P362


+39(10)628 [US668] "Perplexities", A Page of Puzzles
X1 The motor-garage puzzle: Interchange pairs of four cars in an E-shape
X2 A spelling puzzle: Place 9 letters in 3x3, maximize three-letter words
 in row/col/diag in either direction (up to 16 are theoretically possible)
X3 A queer thing in money: *
S0


+39(10)757
X4 The "T" card puzzle: How many sols a+b+c+d+e=c+f+g+h+i, {a,...,i}={1,...,9}?
X5 The "Strand" square: Seven disjoint 7 queens solutions on 7x7
X6 A fair distribution: *
S1 43 moves
S2 GET, TEG, SUP, PUS, PAT, TAP, GAS, SAG, PIG, GIP, SET, TIS, AIA
S3


+40(10)140
X7 The mouse-trap puzzle: Exchange two cards, then catch 21 mice cyclically
X8 A letter "N" chess problem (Loyd): Pieces arrange in N shape; mate in two
X9 A digital puzzle: ab x cde = fghi, a x bcde = fghi, {a,...,i}={1,...,9}
S4, S5, S6


+40(10)278
X10 The grasshopper puzzle: cyclic aAAAAA0BBBBBb to bBBBBB0AAAAAa
X11 Four-in-line puzzle: Ten points in 6x10 array, 5 lines of 4
X12 A word square: Permute the offdiagonal elements of given 6x6 to achieve one
S7, S8
S9 nine solutions only, e.g. 12x483=5796, 4x1963=7852


+40(10)420
X13 The ten sheep: How many 2x5 Young tableaux?
X14 A chess puzzle: White K and Q mate black K without moving the white K
X15 Domestic economy: *
S10 States that the n-counter generalization needs n^2+4n+2 moves
S11 Claims that there are only two ways
S12 PASTOR/ATTIRE/STUPID/TIPTOE/ORIOLE/REDEEM [Hoffmann's P5.10h in 1893]


+40(10)563
X16 The Dutchmen's wives (found in Ladies Diary 1739): *
X17 The tube railways: Hamilton path from A delaying visit to C
X18 A little dissection puzzle: Dissect square+halfsquare into four congr parts
S13 He states the general formula for n (a Catalan number), without proof
S14, S15


+40(10)624
X19 Boys and girls: 00ABABABAB -> BBBBAAAA00, each step swaps
X20 The traveller's puzzle: Count routes from NW to SE corner, all steps S or E
X21 The mystic eleven: Min and max abcdefghi div by 11, when {a,...,i} are
 nine of {0,1,...,9}
S16, S17, S18


+40(10)822-824 Christmas Puzzles
X22 Wilson's queer relationship: His uncle was also his nephew
X23 The eight diners: Derangements (each got the wrong hat)
X24 Mr. Pankhurst's "Patience": Variant of Klondike with full knowledge
 [In X274 he says Bergholt later gave this the new name "King Albert"]
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X25 Mr. Waterson's chess ending: White wins in hopeless-looking position
X26 Eight chess problems: Each with eight pieces in one file
S19, S20, S21

+41(11)116-117
X27 The ten counters: Five-peg tower of Hanoi, with 10 disks in 31 moves
X28 The twenty-one trees: In 12 lines of 5
X29 The banner puzzle: Dissect square into two squares, don't cut the lions
X30 The zigzag puzzle: Restricted sliding blocks, get K in corner of 3x3
 without him moving in the center
S22, S23, S24, S25, S26

+41(11)235
X31 The three queens: They checkmate black king without leaving bottom row
X32 The farmer's puzzle: *
X33 The football players: *
S27 Says 111 moves will do 20 disks
S28
S29 One square is 4x4, the other 3x3
S30

+41(11)362
X34 The wassail bowl: Pouring from (12,0,0,0,0,0) to (0,0,0,4,4,4) with
 capacities (12,5,3,12,12,12)
X35 A quaint chess ending:
X36 The star puzzle: Tour of 8x8 from c5 to d4 in 14 straight strokes
S31, S32, S33

+41(11)503
X37 The sixteen sheep: Choose 9 interior edges, enclose (6,6,4)
X38 Mate in three moves: White has only a rook, Black only a pawn
X39 A puzzle for card-players: Cover edges of K12 with 11 perfect matchings
S34, S35, S36

+41(11)627
X40 The four frogs: They change places; diagram intentionally obscures it
X41 A coin puzzle: Prepare an arrangement, then deal and get HTHTHT
X42 Chessboard solitaire: Jumping 32 counters until only 2 remain
S37, S38
S39 In his schedule all have each other player as partner once, opponent twice

+41(11)746
X43 A railway muddle: Get long trains past each other
X44 A critical chess position: Mate in three from desperate position
X45 Dissecting a mitre: Dissect square minus wedge into square
X46 A perplexing distribution: One hundred coins make 19x19 pence in diff ways
S40, S41, S42

+42(11)108
X47 A puzzle for motorists: Connect 8 sources to 8 sinks without crossing
X48 The four digits: Represent 100 with four 1s, four 2s, ...
X49 A puzzle with pawns: No three in line on 8x8, occupying d4 and e5
X50 A deal in apples: *
S43, S44, S45, S46

+42(11)225
X51 A new counter puzzle: Interchange two pairs of bishops on 5x4 board,
 never letting opposing bishops attack
X52 A veneer puzzle: Pack 4 L-tetrominoes and 4 Z-pentominoes into 6x6
X53 The honest dairyman: Pouring from A to B, then B to A, then A to B
 gives what mixtures?
S47, S48, S49, S50

+42(11)348
X54 A new match puzzle: 18 matches can enclose 4- or 5-sided spaces of
 relative areas 3:1
X55 A tennis tournament: Three rounds of 4 couples, nobody playing twice
 with or against another
X56 The Twickenham puzzle: abcdeABCDE0 -> CDeaEbAcBd0 on 11-cycle,
 lowercase move left, UPPERcase move right, can't jump your own case
X57 Casting the die: Odds of getting exactly one 1 in four throws
S51, S52, S53

+42(11)477
X58 The four stars: Cut 6x6 into 4 congruent parts, resp containing a6,c2,d2,e2
X59 Odds and evens game: Start with 15 beans, alternately take {1,2,3} until
 empty; then the player who has taken an odd number wins; generalize
X60 Card triangles: Analyze a+b+c+d=d+e+f+g=g+h+i+a, {a,...,i}={1,...,9}
X61 A domestic tragedy: Rebus, "A small underfed cat..."
S54 [Non-rigidity makes many more solutions possible than he gives, and tends
 to "cook" all such match puzzles]
S55 {AdBe,DaEb},{AeDb,EaBd},{AbEd,BaDe}; he states that 8 couples can
 similarly play a 7-day tournament [this is X985 below]
S56, S57

+42(11)597
X62 A dungeon puzzle: Rook path starting at e1, maximum turnings
X63 Mate in two: "A pretty little problem by Dr. Gold"
X64 Mrs. Timpkins's age: *
X65 The cone puzzle: Maximum volume of cylinder contained in a given cone
S58
S59 "The general solution is two complex and length for this page"
S60

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S61

+42(11)786-788 Christmas Puzzles
X66 The station-master's little poser: Too-too-too-too-too-too
X67 London and York: Trick of words
X68 A pavement puzzle: *
X69 The tea-service puzzle: 5-puzzle to transform a0b to a0c in fewest moves
                                              aac     aab
X70 The post-office clerk's dilemma: *
X71 The fifty puzzle: What three of {3,6,9,12,15,19,21,25,27,30} add to 50?
X72 The labourer's question: * [7w=3i, w+i=365]
X73 A new motor-car puzzle: Hamiltonian path in certain 12-vertex network
S62 e1 to b1 in 57 moves
S63, S64
S65 1/3 the altitude

+43(12)116
X74 The nine circles: Pass through in four straight strokes
X75 A new money puzzle: Smallest mult of farthings in L s d, using {1,...,9}
X76 Mating ten kings at once: He cites a 1909 claim of nine
X77 Buying chocolate: *
S66, S67, S68, S69, S70, S71, S72, S73

+43(12)228
X78 The domino frame puzzle: Place 28 dominoes in 15x15 frame, all side sums 44
X79 The cardboard box: * [ab=120, bc=96, ac=80]
X80 Playing for counters: *
X81 Mate in two moves: (by Meredith)
S74 Must use the width of the circles
S75, S76, S77

+43(12)357
X82 The ten prisoners: Maximize evens in rows/cols/alldiags
X83 A printer's error: a^b c^d = abcd
X84 A chess puzzle: Put white R,R,N so that black K at d5 in check, can't move
S78 Many different solutions; he doesn't discuss 42, 43 as alternative sums
S79, S80
S81 A triple queen sacrifice (Black has three ways to take it, all lose)

+43(12)478
X85 The crowded chessboard: Superpose sols to 8 queens, 8 rooks, 14 bishops,
 and 21(!) knights
X86 A rebus motto:
X87 The peal of bells: Ham cyc of 4! perms by adj xchs, no end thrice in row
S82, S83, S84

+43(12)597
X88 The exchange puzzle: Achieve given perm by swapping adj pieces of opp color
X89 The trusses of hay: Find {a,b,c,d,e} given the ten sums {a+b,a+c,...,d+e}
X90 The stop-watch: Three hands nearly equidistant, with variation
S85, S86
S87 states that solutions exist for any number of bells

+43(12)718
X91 Inspecting a mine: Chinese postman on 4x5 grid
X92 The letter block puzzle: 8-puzzle GEF/HCB/D0A -> ABC/DEF/GH0, fewest moves
X93 A chain puzzle: Cheapest way to join up nine pieces of chain
S88 sketches a proof that 17 moves is minimum
S89
S90

+44(12)110
X94 Right and left puzzle: Fewest exchanges to achieve a given perm
X95 Chinese money: *
X96 The wizard's cats: 10 given points to be separated by three circles
S91, S92
S93 He breaks up two short pieces

+44(12)238
X97 Stepping-stones: Land twice on opposite shore, use each stone equally often
X98 Concerning wheels: Part of train is always moving backwards
X99 Simple multiplication: ab...z x 3 = b...za x 2, and a=3
S94, S95, S96

+44(12)350
X100 St. George and the dragon: Ham knight path on 7x7 from d4 to b2
X101 An easy square puzzle: Make square from 5 triangles of sides 1, 2, sqrt5
X102 The Union Jack: Draw as much as possible of this fig with continuous line
 [I mean, find the largest Eulerian subgraph; equiv to Chinese postman]
S97, S98, S99

+44(12)478
X103 The honeycomb puzzle: Hamiltonian path to spell a familiar proverb
X104 A shopping perplexity: *
X105 A wonderful village: Tricky wording
S100, S101, S102

+44(12)592
X106 The four knights' tours: Divide 8x8 into four congruent parts, each
 part admitting a Hamiltonian cycle
X107 Torpedo practice: 16 points, sink as many as poss always passing under 3
X108 The four sons: Divide 3/4 of square into four same-shape parts each
 adjacent to the center
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S103, S104, S105

+44(12)774
S106, S107, S108

+44(12)796-798 A Set of Nutcrackers
Z12.1 Queer relationships: A man married the sister of his widow...
Z12.2 A legal difficulty: A man wills 2/3 or unborn child if a boy...
Z12.3 An arithmetical question: *
Z12.4 The doctor's query: Mixing liquids
Z12.5 The new partner: *
Z12.6 Elementary arithmetic: What number is a multiple of all numbers
Z12.7 The nine almonds: Peg solitaire with diagonals
Z12.8 A weighing puzzle: Divide 20 into 2+2+...+2 with weights 5 and 9
Z12.9 A fascinating puzzle-game: Odds and evens [X59] starting with 27,
 and with moves {1,2,3,4}

+45(13)113 Perplexities. With Some Easy Puzzles for Beginners
X109 A cutting-out puzzle: Dissect 1x5 into sqrt5 x sqrt5, four pieces
X110 A new match mystery: Miser\'e Nim
X111 The twelve mince-pies: 12 points in 7 lines of 4
[The next are designated "Easy Puzzles"]
X112 Matches puzzle: Support matchbox with three matches, their heads untouched
X113 The box of sweets: *
X114 Anagrams:
X115 Missing words: All anagrams of each other
X116 Digits and squares: abc = def/2 = ghi/3, {a,...,i}={1,...,9}

+45(13)118 Solutions to the Puzzles and Problems in Our Last Number
SZ12.1, SZ12.2, SZ12.3, SZ12.4, SZ12.5
SZ12.6 "The product obtained by multiplying together all numbers!"
SZ12.7, SZ12.8, SZ12.9

+45(13)238
X117 Reaping the corn: *
X118 The six sheep-pens: Enclose 6 fields of equal size with 12 hurdles
X119 The junior clerks' puzzle: *
X120 A charade: Like CHAR-ADE
X121 The mouse and the corn: Trick of wording
X122 A word square: 5x5
S109, S110, S111, S112, S113, S114, S115, S116

+45(13)344
X123 Crossing the river: Officer and 357 soldiers
X124 A patchwork puzzle: Make 13x13 from 12x12 and 5x5, maintaining the grid
X125 An enigma:
X126 A charade:
X127 Flies on window-panes: 9x9 queens, six agree with another solution
S117, S118, S119, S120, S121, S122

+45(13)478
X128 The reverse-way puzzle: 012345 -> 0654321 on a cycle
X129 Simple division: 701 mod x = 1059 mod x = 1417 mod x = 2312 mod x
X130 The Nihilists: *
X131 The seven pigs: Separate them by three straight lines
X132 A paradox: Four men all play and all gain money
X133 A charade:
S123, S124, S125, S126, S127

+45(13)598
X134 Round the coast: 8-letter word with pattern abcdedfb
X135 The magic hexagon: {1,...,19} in 12 lines of 3 all make 23
X136 The two candles: *
X137 Queer arithmetic: Trick of wording and roman numerals
X138 Drawing a spiral: Approximately, using a compass
X139 A charade:
S128 [27 moves is far from best possible; the optimum is not clear]
S129 [A better way will be discussed in S682 below]
S130, S131, S132, S133

+45(13)710
X140 The forty-nine stars: Hit them all in 12 straight connected strokes
X141 New measuring puzzle: (10,10,00) -> (x,14-x,3,3), capacities (10,10,5,4)
X142 The nest of rectangles: How many in an n x n grid?
X143 Curious numbers: x+1=y^2, 2x+1 = z^2
X144 A word square: 6x6
X145 The miners' holiday: *
S134, S135, S136, S137, S138, S139

+46(13)110
X146 Water, gas, and electricity: Connect A,B,C to W,G,E; no pipes cross
X147 An old three-line puzzle: Trickery (cheating) needed here too
X148 Curtailment: Word loses its first and last letters
X149 Find Ada's surname: *
S140, S141, S142, S143, S144, S145

+46(13)221
X150 A plantation puzzle: 10 points in 5 lines of 4, in 7x7 minus a4 d7 g4 g7
X151 A family party: How can 1 grandfather + ... be only seven people?
X152 The eighteen dominoes: Make magic square summing to 18 in row/col/diag
X153 A charitable bequest: *
X154 A word square: 5x5
S146, S147, S148, S149

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+46(13)352
X155 The six frogs: (Or n frogs) Like X128 but not cyclic
X156 The motor-bicycle race: *
X157 The dissected circle: Fewest connected strokes, can trace more than once
X158 The cyclists' feast: *
X159 Their ages: *
S150, S151, S152, S153, S154


+46(13)472
X160 The barrels of honey: *
X161 Painting the lamp-posts: *
X162 The lunatic stamp-licker: [A weird problem]
X163 The joiner's problem: Dissect inverse (convex) mitre into square
S155 21 moves [thus 6 better than his solution to the less constrained X128]
S156, S157, S158, S159


+46(13)600
X164 The queen's journey: Max Euclidean dist from d1 in five noncrossing moves
X165 The family ages: *
X166 The fatal well: *
X167 The educated frogs: 0AAABBB -> BBBAAA0, jumping by {0,1,2}
X168 The germ puzzle: Dissect into two congruent parts with one cut
S160, S161, S162, S163


+46(13)796-798 Christmas Eve at Hollibury Hall. A Record of Some Easy Puzzles
Z13.1 Aunt Nancy's box: Concealed words in British Railway stops
Z13.2 The motor-car fare: *
Z13.3 The three squares: Enclose 3 equal squares with edges {2,2,2,2,1,1,1,1}
Z13.4 Cats and dogs: Interchange two pairs of markers on a certain network
Z13.5 Cutting the pudding: Cut into two congruent parts without hitting plums
Z13.6 The nine circles: *
Z13.7 The thirty-three pearls: *
Z13.8 The hydroplane puzzle: *
Z13.9 The chessboard puzzle: Assemble .CUT.THY.LIFE. into 8x8
Z13.10 The great scramble: *
S164, S165, S166, S167, S168


+47(14)112-113
X169 The four postage-stamps: How many ways to put a tetromino in 3x4 box?
X170 The Christmas-boxes: [A reprise of X46]
X171 The twelve pennies: 11111111111 -> 222222000000 always passing over two
X172 Mother and daughter: *
X173 An angling pastime: Buried fish words
X174 An enigma:
X175 The four gates: *
X176 The three sugar basins: *
X177 Missing words:
SZ13.1, SZ13.2, SZ13.3, SZ13.4, SZ13.5, SZ13.6, SZ13.7, SZ13.8, SZ13.9, SZ13.10


+47(14)233
X178 A dormitory puzzle: (a+b+c)/k=c+d+e=e+f+g=g+h+a, {a,...,h}=S, k={1,...,6}
X179 Stealing the bell-ropes: *
X180 The ten cards: A variant of kayles
X181 Pocket money: Max coins unable to change 10 shillings
X182 A word square: 5x5
S169, S170, S171, S172, S173, S174, S175, S176, S177


+47(14)358
X183 Placing halfpennies: Put unit circles into 3x5 box, |cent(k)-cent(k+1)|=2
X184 A teasing chess puzzle: Mate with two queens staying on diagonal
X185 The two aeroplanes: *
X186 An enigma:
S178, S179, S180, S181, S182


+47(14)478
X187 A new bishop puzzle: Exchange 4 bishops on 5x4 [a disguised form of X51]
X188 The Sabbath puzzle: If Christians, Jews, Turks travel around the world...
X189 Adding the digits: Hokey coinage
X190 Missing palindromes: "...between [NOON] and [EVE], when [BOB]..."
S183, S184, S185, S186


+47(14)595
X191 The artillerymen's dilemma: A pyrimidal number also a square
X192 Who was first?: A heard a gunshot, B saw the smoke, C saw the bullet hit
X193 A calendar puzzle: Probability that a new century begins on Sunday
X194 A trick with dice: Deduce a,b,c from ((2a+5)5+b)10+c
S187 , S188, S189, S190


+47(14)707
X195 A new domino puzzle: 28-cycle with each quarter summing to 42
X196 To be solved mentally: *
X197 The ten apples: Move one, then win at peg solitaire
X198 A charade:
X199 The Greek cross: To be assembled from four given pieces
S191, S192, S193, S194


+48(14)95
X200 The tessellated tiles: Choose 16 of 20 4-colored tiles, make 4x4 square
X201 The fly and the honey: *
X202 Another tree-planting puzzle: 13 points in 9 lines of 4
X203 Excavations: Buried words
X204 An alphabetical puzzle: English words ...a...e...i...o...u...y
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S195, S196, S197, S198, S199

+48(14)220
X205 Card magic squares: 3 magic 3x3s from {1,1,1,...,9,9,9}, diff sums not 15
X206 The new gun: Trick of words, the fencepost fallacy
X207 A new cutting-out puzzle: Make square from a 29-cell shape
X208 The three villages: *
X209 A buried proverb:
S200 [Surely there are many, many more solutions]
S201, S202, S203, S204

+48(14)335
X210 A motor-car puzzle: Longest rook path from d8 with 15 turns, no line twice
X211 The smugglers' wine: Distribute 7 quarts, 7 pints, 5 empties of each kind
X212 The eighteen counters: Partition {1,1,1,2,2,3,3,5,5,10,10,10,20,20,20,
 25,25,50} into three sets of six with the same sum
X213 Catching the thief: *
X214 Missing words:
S205, S206, S207, S208, S209

+48(14)470
X215 The five regiments: Connect five sources to five sinks on 8x8 grid
X216 The basket of potatoes: *
X217 A chess puzzle: (by Frankenstein) Retract last move and mate in one
X218 Concerning a cheque: *
X219 Thrice beheaded:
S210 Can go 70; if he had visited all points would have gone only 64
S211, S212, S213, S214

+48(14)589
X220 Exercising the spies: Fewest moves of 15-puzzle to make knight's string
X221 The war-horse: *
X222 Avoiding the mines: A broken line from bottom to top
X223 The despatch-rider: *
X224 A battle scene charade:
S215, S216, S217, S218, S219

+48(14)777-779 Puzzles at a Village Inn
Z14.1 The Louvain house: 1+...+(k-1)=(k+1)+...+n, 50 < n < 500
Z14.2 The red cross puzzle: Dissect Greek cross into two of half size
Z14.3 The two turkeys: *
Z14.4 Sinking the fishing boats: [Reprise of X140]
Z14.5 Marching on city: 10 divisions all to arrive simultaneously
Z14.6 Clock puzzle: * [The fencepost fallacy again: 6 seconds to strike 6,...]
Z14.7 The bewitched watch: Clock hands switched
S220, S221, S222, S223, S224

+49(15)111
X225 The fort garrisons: Make magic star from {16,18,20,22,24,26,28,28,32,36}
X226 The iron chain: *
X227 The humane Arab:
X228 Charade:
X229 New card magic squares: 52 cards into 4x4,6x6 magic squares (sums 36,37)
X230 Longfellow's bees: *
X231 Mate in three: (by Loyd)
SZ14.1, SZ14.2, SZ14.3, SZ14.4, SZ14.5, SZ14.6, SZ14.7

+49(15)233
X232 Circling the squares: x(k)^2+x(k+1)^2=x(k+5)^2+x(k+6)^2, x(k)=x(k+10)
X233 The Rajah's diamonds: *
X234 Strange, though true: Fact about horse's legs
X235 An historical puzzle: Arthur Connor's subversive verse
S225, S226, S227, S228, S229, S230, S231

+49(15)345
X236 The strategic railways: 7 sliding blocks on 8-cycle, k <-> (k+1 or k+2)
 [is like X128, but with an odd number of frogs]
X237 A military puzzle: 120 men in 12 rows of 11, equidistant from captain
X238 The improvised draughts-board: 4+4+4+11+11+10+10+10 into 8x8
X239 Another street puzzle: [cf Z14.1] 1+3+...+(2k-1)=2+4+...+2n;
 also 2+4+...+2k = 1+3+...+2n-1
X240 Carrying the bags: 4 miles, 2 bags, old gardener, young boy
S232, S233, S234, S235

+49(15)466
X241 War strategy: Chess position, Black to play, White to win
X242 From the front: *
X243 The Austrian pretzel: Most pieces with a single straight cut
X244 Meeting the trains: *
X245 Quaint arithmetic: MILD (Roman numerals)
S236, S237, S238, S239, S240

+49(15)599
X246 The pirates' flag: Change 12 stripes to 10
X247 A cow's progeny: One per year starting at age 2; how many in 25 years?
X248 The way to Tipperary: Shortest even number of steps
X249 A remarkable plant:
X250 A little two-mover: (by Loyd)
S241, S242, S243, S244, S245

+49(15)712   0 0 0   0 0 0
X251 Nine men in a trench: Sliding blocks 0234567891 -> 1234567890
X252 A puzzle in billiards: *

X253 Mutual accommodation: 5 queens, 5 rooks, 4 bishops, 10 knights on 5x5
 [cf X85]
X254 A word square: 5x5
X255 The price of apples: *
S246
S247 Fibonacci numbers [but he doesn't know that F_1+...+F_n = F_{n+2}-1]
S248, S249, S250

+50(15)113
X256 The 37 puzzle game: Add {1,2,3,4,5} until 37 (win) or more (lose);
 consecutive moves must differ
X257 The five fences: Separate 16 points
X258 The beheaded dignitary:
X259 A military knot: Tangled sentences missing two words
X260 The weighing-machine fraud: [Reprise of X89]
S251, S252, S253, S254, S255

+50(15)210
X261 A star puzzle: Magic 6-star of {1,2,...,12} with sums 26
X262 A new domino puzzle: 8 dominoes in 4x4, even in each row/col/alldiag
X263 A cryptic sign-board: A French pun
X264 The coin and hole: What is largest coin that will pass thru a given hole?
S256, S257, S258, S259, S260

+50(15)349
X265 Turks and Germans: Josephus 8-cycle with large increment
X266 The digital century: 12+3-4+5+67+8+9=100; reduce to 3 signs
X267 The cardboard box: How many hexominoes fold into a cubical box?
X268 Missing words:
S261, S262, S263, S264

+50(15)475
X269 The handcuffed prisoners: 9 men in triplets, 6 days, all 36 pairs adjacent
X270 A new match puzzle: 3 equal squares with nine matches
X271 An old chess puzzle: (by Marache)
X272 Root extraction: (5+1+2)^3 = 512, (4+9+1+3)^3 = 4913; others?
X273 A charade:
S265, S266, S267, S268

+50(15)593
X274 "Strand" patience: Exchange two 9-card piles with 4 blank piles
X275 Sawing the logs: *
X276 The crescent and the star: Which has greater area?
X277 More beheading:
X278 An old two-mover: (by Loyd)
S269 He has solved 21 prisoners in 15 days, "a hard nut"
S270, S271
S272 There are three more: 5832, 17576, 19683
S273

+50(15)783-787 Unrecorded Cases. Can You Solve Them?
Z15.1 The ruby brooch crime: 44 jewels -> 41 jewels but loops still each hold 8
Z15.2 The Brondesbury burglary: Three-letter word of rare letters: LYM
Z15.3 Stealing the bell-ropes: How was it possible with only a penknife?
Z15.4 The Pimlico murder: abc x de = acbde
Z15.5 The stolen albums: 2a-d, 2a, and 2a+d all squares
Z15.6 Who killed Rattenbury?:
Z15.7 A strange disappearance:
Z15.8 The trail of the smasher: A path of length 50
Z15.9 The shooting of Brooks: Visual pun
S274 His best (not given) is 62 moves
S275
S276 The areas are equal!
S277, S278

+51(16)108-110
X279 The seven-pointed star: Magic {1,2,...,14}
X280 Missing words:
X281 Queen Victoria's acrostic: Said to be composed by her in 1856
X282 A curious chess puzzle: (by Barrett)
X283 The Victoria cross: 8-puzzle, to rotate left (in 18 moves)
SZ15.1, SZ15.2, SZ15.3, SZ15.4, SZ15.5, SZ15.8, SZ15.6, SZ15.7, SZ15.9

+51(16)168-169
X284 The Armenian maiden: Rook path a8 to g2 in 22 straight courses
X285 The card pentagon: a+b+c=c+d+e=e+f+g=g+h+i=i+j+a, {a,...,j}={1,...,10}
X286 The first double acrostic:
X287 A charade:
S279, S280, S281, S282, S283

+51(16)301
X288 A cunning answer: *
X289 An enigma:
X290 Oranges and apples: ABABABABAB00 -> 00AAAAABBBBB cyclically
X291 A war drama: 3x3 word square and magic square
X292 Freddy's pudding: Trick of wording
S284, S285, S286, S287

+51(16)440
X293 The despatch-rider in Flanders: *
X294 A familiar quotation: K I N I (Shakespeare)
X295 The smuggled glycerine: *
X296 A time puzzle: *

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X297 Anagrams:
S288, S289, S290, S291, S292


+51(16)538
X298 A new leap-frog puzzle: 17-peg solitaire with diagonals, in 4 moves
X299 Converting the Kaiser: Word ladder KAISER -> PORKER
X300 An ingenious match puzzle: An outrageous mathematical pun
X301 The missing letters:
X302 Another zigzag puzzle: (by Shinkman) A sliding puzzle analogous to X30
S293, S294, S295, S296, S297


+51(16)641
X303 Reflected writing: How to do it easily
X304 Academic courtesies: *
X305 The twenty-two game: Like X256 but using {1,1,1,1,2,2,2,2,3,3,3,3,4,4,4,4}
X306 The wrong move: Chess problem analogous to X217, but with a new catch
S298, S299, S300, S301, S302


+52(16)75
X307 The horse-shoe game: With two black and two white markers on 5 vertices
X308 Find your enemy: *
X309 The false scales: *
X310 Mate with the pawn: (by Julien)
X311 A relationship puzzle: This man's mother was my mother-in-law (trivial)
S303, S304, S305, S306


+52(16)200
X312 Mine-sweeping: 14 straight courses from a4 to a4, at h2 after 7, kills 8x8
X313 Can it be done?: 32 chessmen all unable to move?
X314 A trio of word squares: 5x5 with one word in common
X315 Laying out shells: Sum of 4 consec triangles = square (eg 15+21+28+36=100)
X316 An anagram:
S307, S308, S309, S310, S311


+52(16)339
X317 Nine-letter puzzle: [A reprise of X2]
X318 The amusements tax:*
X319 The square, cross, and circle: From three aspects
X320 The Nelson puzzle: Forcing a permutation
X321 Numbered charade: (One-dimensional crossword puzzle)
S312, S313, S314, S315, S316


+52(16)470
X322 Exchanging the knights: On 5x8, alternate moves, never attack an opponent
X323 Donkey-riding: *
X324 Domestic economy: *
X325 A queer word:
S317, S318, S319, S320, S321


+52(16)578
X326 The restaurant check: Exactly two subsets of {1,2,3,4,5,6,8,12,14,16,24}
 add up to x
X327 The missing code word: *A*E*I**OU*
X328 Two eight-pointed stars: A curious isomorphism between two hypergraphs
X329 Mate in three: (by Loyd)
S322 64 moves [is it minimum???]
S323, S324, S325


+52(16)695-697 Posers at a Christmas Dinner
Z16.1 Cryptic arrangement: A typographic rebus
Z16.2 Threepence and twopence: *
Z16.3 Arithmetic riddle: *
Z16.4 Gardener's dilemma: Plant four shrubs equidistant from each other
Z16.5 Drawing an oval: With one sweep of compass
Z16.6 Drawing a square: With compasses only
Z16.7 Circular field partition: Into four equal parts with equal-length fences
Z16.8 Men walking and facing each other: Why didn't they get closer?
Z16.9 Five Arab maxims: Concealed in a 6x6 square
Z16.10 The 25-acre square: Debug an old puzzle
Z16.11 Numerical riddle: Take half of five, remove one, get five [cf X137]
Z16.12 Anagrams: On famous Englishman's names
Z16.13 Another anagram: Make one word from NEW DOOR [cf Hoffmann's P5.2]
Z16.14 Crowned kings: Why was there only one since the Conquest?
Z16.15 Alphabetical riddles: Why is A like noon? ...
Z16.16 The number 102840: Its hidden meaning
Z16.17 Objects seen on a penny: For example, an animal (hare=hair)
Z16.18 Sparkling puzzle: Remove one letter at a time
S326, S327, S328, S329


+53(17)95-97
X330 The Russian motor-cyclists: *
X331 The farmer's sons: Eight sons get same amount of land and trees
X332 A reversed number: ba-9 = ab = 5(a+b)
X333 The table-top and stools: Dissection with only six pieces
X334 A knight's path: In 4x5, maximize the fixed points of its permutation
X335 When did the dancing begin?: Clock hands changed places
X336 The lost statesman:
SZ16.1, SZ16.2, SZ16.3, SZ16.4 [tetrahedron], SZ16.5 [coil the paper first]
SZ16.6, SZ16.7, SZ16.8, SZ16.9, SZ16.10, SZ16.11 [Roman numerals]
SZ16.12, SZ16.13 [ONE WORD], SZ16.14, SZ16.15
SZ16.16 [One ought to wait for tea], SZ16.17, SZ16.18


+53(17)196
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X337 The fly's tour: M\"obius strip
X338 Counting the wounded: *
X339 Drawing a straight line: Without a ruler
X340 The two ships: *
X341 The mutilated word:
S330, S331, S332
S333 "Although every ellipse is an oval, every oval is not an ellipse"
S334 Six fixed points, claimed to be maximum
S335, S336


+53(17)311
X342 A tour on the icosahedron: Chinese postman
X343 A mechanical paradox: Wheels and teeth
X344 A pretty chess puzzle: (by Reichhelm)
X345 Odd digits and even: 1+3+7+9/5 = 2+4+6+.8
S337, S338, S339, S340, S341


+53(17)415
X346 How far was it?: *
X347 Shooting blackbirds: *
X348 Getting the wine: Without a corkscrew
X349 Playing for counters: *
X350 A charade:
S342, S343, S344, S345


+53(17)501
X351 A golf competition puzzle: Scheduling problem for 2n players on n links
X352 The egg merchant's story: *
X353 A new domino puzzle: Partition 28 into 7 foursomes, magic 3x3 minus center
X354 The banker and the note: He finds & spends a note, later learns it's fake
X355 A good two-mover: (by allender)
S346, S347, S348, S349, S350


+53(17)607
X356 A "STRAND" puzzle: 6 solutions to 8 queens on 8x8 minus 2x2 center
X357 The boat-race crew: Choose 4 L's and 4 R's from {4.L,5.R,2.[LR]}
X358 Hurdles and sheep: Fewest unit lines to enclose an area of 10 or more
X359 The three brothers: *
X360 A word square: 5x5 given only the diagonal and another hint
S351, S352, S353, S354, S355


+54(17)85
X361 A knight's move puzzle: 24-puzzle with jumping (not sliding) blocks
X362 The three garden beds: *
X363 The bun puzzle: Dissect three circles into four equal-area parts
X364 More about hens: * [A new variation of the "hen-and-a-half" chestnut]
X365 A cryptic word:
S356, S357, S358, S359, S360


+54(17)181
X366 The word star puzzle: Five 4-letter words in a star configuration
X367 Counting the huns: *
X368 A pretty end-game: (by D'Orville)
S361, S362, S363, S364, S365


+54(17)310
X369 A motto puzzle: Spell 25-letter proverb with king's path on 5x5
X370 Hoarded gold: *
X371 A definition: High-falutin' description of a familiar household object
X372 Those Russian cyclists again: *
X373 A rebus:
X374 A charade:
S366, S367, S368


+54(17)415
X375 A new match puzzle: Odd number of matches to make 4x4 into 4+4+4+4 cells
X376 Mrs. Wilson's family: *
X377 A word square: 6x6
X378 An old chess puzzle:
X379 An enigma:
S369, S370, S371, S372, S373, S374


+54(17)407-410 War Tangrams


+54(17)511
X380 Changing places: Knights and rooks on 4x4, analogous to X51 and X322
X381 A Dreamland clock: The minute hand moves backwards
X382 The postwoman's puzzle: Chinese postman to circumnavigate 2x3 blocks
X383 Sharing their pocket-money: *
X384 A charade:
S375, S376, S377, S378, S379


+54(17)621-624 Puzzles From a Secret Drawer. Some Easy Christmas Posers
Z17.1 An elegant charade:
Z17.2 Lady Anne's ribbon: *
Z17.3 Stealing the bell-ropes: [A slight simplification of Z15.3]
Z17.4 The two tinder-boxes: *
Z17.5 Mrs. Hembrow's riddle:
Z17.6 The bricklayer's task: *
Z17.7 The carpet and the cup: Trick of wording
Z17.8 Pictorial arithmetic: TENT-SHOE-POT+WIG+POST+HOE-TWIG
Z17.9 The miller's toll: *
Z17.10 Missionaries and cannibals: Only one of each could row
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Z17.11 The Sedgemoor festivities: *
Z17.12 Word reversals:
Z17.13 Weighing the fruit: *
Z17.14 Peter Parker's pin puzzle: Nonattacking bishops on 8x8
S380, S381, S382, S383, S384


+55(18)81-82
X385 The German prisoner puzzle: A thinly disguised 8-puzzle, equivalent to
 458/327/016 -> 123/456/078 in 26 moves
X386 Sharing a bicycle: *
X387 A cryptic language: Nightingale's song transcribed
X388 The six queens: Must pass through all 14 row/col/diag on 6x6
X389 The three dice: Odds of throwing 7 or 13 = odds of throwing x or y
X390 An arithmetical charade:
X391 Buried geography:
SZ17.1, SZ17.2, SZ17.3, SZ17.4, SZ17.5, SZ17.6, SZ17.7, SZ17.8, SZ17.9, SZ17.10
SZ17.11, SZ17.12, SZ17.13, SZ17.14


+55(18)183           5   1     1   5
X392 The "pill-boxes": 60002  ->  20006  sliding blocks
                       7 0 3     3 0 7
                       8   4     4   8
X393 A digital puzzle: abcdefgh x 6 = ABCDEFGHI, {1,...,9} each side
X394 Large word squares: 7x7
X395 A pretty end-game: (by Cook) White to move and draw
S385, S386, S387, S388, S389, S390, S391


+55(18)255
X396 The submarine net: Minimum cut
X397 The ladder: *
X398 The quarrelsome offspring: *
X399 A rebus:
S392, S393, S394, S395


+55(18)338
X400 The six submarines: Six wooden matches mutually touch
 [He also criticizes a suggested way to six coins to do so, cf Z09.1]
X401 Digging a ditch: *
X402 An alphabet puzzle: 28-letter sentence including {A,...,Z}
X403 A charade:
X404 A pretty finish: White mates in two
S396, S397, S398, S399


+55(18)404
X405 The nine squares game: Dots and boxes
X406 A card trick: *
X407 More bicycling: Extend X386 to three people sharing a bike
X408 Decapitations:
S400, S401, S402, S403, S404


+55(18)488
X409 The domino swastika: (by Wilfrid Bailey!)
X410 Building a word square: 7x7 given as anagrams
X411 A charade:
X412 The barrel of balsam: *
S405, S406, S407, S408


+56(18)74
X413 The Siamese serpent: Draw as much as possible in one continuous line
X414 Gidsby's geese: *
X415 The traveller's puzzle: Fewest consec straight lines to cover 8x8, a4->a3
X416 A charade:
X417 An enigma:
S409, S410, S411, S412


+56(18)135
X418 The alien bomb-dodgers: 19 on each of 4 sides of a house
X419 Word chains: ARMY -> NAVY with steps abcd -> cdef
X420 The four fours: [He traces it to 1881] Three solutions for 89
X421 Find the word:
S413, S414, S415, S416, S417


+56(18)228
X422 Economy in string: *
X423 Missing words:
X424 The six noughts: Choose six of fifteen given numbers, obtain the sum 1111
X425 An old three-mover: Mate in three with queen and bishop only
X426 The printer's problem: {J,A,N,U,A,R,Y} \cup ... \cup {D,E,C,E,M,B,E,R}
S418
S419 His solution ARMY MYTH THUS USER ERSE SEAL ALTO TOOL OLLA LANA NAVY breaks
 the rule that proper names [Erse] are not allowed; ARMY MYTH THAN ANNA NAVY
 is much better --- "ANNA" is not a proper name, it's an Indian coin
S420, S421


+56(18)304
X427 The smugglers' wine: [Reprise of X211]
X428 Simple division: A skeleton showing seven 7s
X429 Two squares in one: Dissect two squares into one, don't cut the small one
X430 An old enigma:
X431 The digits and square: abc+def = ghi, {1,...,9} with extra constraint
S422, S423, S424, S425, S426


+56(18)380
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X432 Making a word square: 6x6 disguised by 32 disjoint knight moves
X433 The postage-stamps puzzle: Chinese remainders *
X434 Giving them names: Andrew is anagram of WANDER, etc.
X435 The milk-and-water man: * [similar to but different from X53]
X436 Missing words:
S427, S428
S429 This construction nicely proves the theorem of Pythagoras
S430, S431

+56(18)482-484 A Posy of Posers. The Puzzles of some Men in Blue
Z18.1 Address of the letter: A typographic rebus
Z18.2 The walking puzzle: *
Z18.3 Five missing words:
Z18.4 Hilman's puzzle: Find four disjoint paths summing to 20
Z18.5 Equal sum and product: using only 1s
Z18.6 The Flanders Wheel: Another disguised 8-puzzle, rotate and reflect
Z18.7 The precocious youngster: *
Z18.8 Find the cat: Visual puzzle
Z18.9 The farmer's seventeen horses: Legacy in proportions 1/2 : 1/3 : 1/9
Z18.10 The leg-raising puzzle: Trick of wording
Z18.11 The false scales: *
S432, S433, S434, S435, S436

+57(19)66-67
X437 A new match puzzle: *
X438 Digital coincidences: a x b = def, a + b = fed
X439 Making a pentagon: With a strip of paper and fingers only
X440 A three-mover: (by Jespersen)
X441 A word square: 5x5
SZ18.1, SZ18.2, SZ18.3, SZ18.4, SZ18.5, SZ18.6, SZ18.7, SZ18.8, SZ18.9
SZ18.10, SZ18.11

+57(19)162
X442 The four pennies: Geometry trick
X443 A side-car problem: *
X444 Lines and squares: Make exactly 100 squares with the fewest lines
X445 A charade:
X446 A cryptic message: Each word beheaded
S437, S438, S439, S440, S441

+57(19)252-253
X447 Word circles: Put {A,E,I,N,O,P,R,S,T,U} in a circle, max words either dir
X448 John and Jane: *
X449 An unsolved enigma:
X450 A teasing legacy: Largest addition sum in sterling, {0,1,...,9}
S442, S443, S444, S445, S446

+57(19)346
X451 A cunning chess problem: (by Loyd)
X452 The moving stairway: *
X453 Is it very easy?: Trick
X454 The two additions: {1,2,3,4,5,7,8,9} into equal 4-digit sums
S447, S448
S449 (no solution yet; see below, following S459)
S450

+57(19)446
X455 The ten barrels: min a+b+c+d=d+e+f+g=g+h+i+a, {a,...,j}={0,1,...,9}
X456 The cow, goat, and goose: *
X457 An old unicursal puzzle: Trick
X458 Missing words:
X459 A puzzling epitaph:
S451, S452, S453, S454

+57(19)546
X460 The four draughtsmen: Reconstruct a grid that has been erased
X461 Expanding words: One letter, then two, etc., always adding a new letter
X462 The domino column: 28x2, each 3 consec 3 rows sum to (x,x)
S455, S456, S457, S458, S459, S449

+58(19)100
X463 The nine queens: 9 queens on 11x11, all 9x9 subboards solve 9-queens prob
X464 The man and the dog: *
X465 Missing words:
X466 Squares and digits: Square number ending with the most repeated digits
S460, S461
S462 [The deltas (left minus right in each row) are 0, 1, -1, 0, 1, -1, ..., 0;
 since 28 is not a multiple of 3 you can't make a cycle]

+58(19)200
X467 The six pennies: Placing them [an extension of X442]
X468 Sir Walter Scott's enigma:
X469 A crease problem: Fold page, SE corner touches W edge, min crease length
X470 A money puzzle: (L6 13s) x 2 = L13 6s; find another
S463, S464, S465, S466

+58(19)300
X471 Tessellated pavements: 29 square tiles per large square, fewest cuts
X472 Hallam's enigma:
X473 Mate in three: (by Cook)
X474 The two fours: 64 with two 4s "It is a fascinating but bewildering puzzle"
S467, S468, S469
S470 (L2 17s) x 6 = L17 2s

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+58(19)400
X475 What nationality?: Visual trick
X476 Easy division: 7a...z = 7 x a...z7
X477 Making a pentagon: With each side 3 inches
X478 Missing words:
X479 A puzzle for accountants: Copying error loses L189 10s
S471
S472 (no solution yet; see below, following X489)
S473, S474

+58(19)500
X480 The knight and the calendar: When do all the adjacent dates sum to 100?
X481 The profiteering grocer: *
X482 The five squares: Trick of wording
X483 A charade:
X484 Buying cucumbers: *
S475, S476, S477, S478, S479

+58(19)595
S480, S481, S482, S483, S484

+58(19)642-644 Simon in Puzzleland. A Christmas Fantasy
Z19.1 Charade:
Z19.2 Jack and Jill: *
Z19.3 Mike's age: *
Z19.4 The lost star: Find it in a patchwork quilt
Z19.5 The five queens: Move two of them to cover all
Z19.6 Odds and evens: Express numbers up to 100 using {1,3,5,7,9} once only;
 also do it with {0,2,4,6,8} once only
Z19.7 The three table-cloths: The largest square they can cover without cutting

+59(20)100 Solutions to Last Month's Puzzles and Problems
[SZ19.1 appeared later, following S494 below]
SZ19.2, SZ19.3, SZ19.4, SZ19.5, SZ19.6

+59(20)102
X485 A new Greek cross puzzle: Form a cross from four given pieces (trick)
X486 Generous doles: *
X487 Squaring the circle: (Approximately)
X488 A mutilated anagram: Two 10-letter words containing {A,B,C,D,E,F,I}
X489 Missing words:
S472 and other "unsolved" enigmas [see WP pages 1--3]

+59(20)204
X490 Folding postage-stamps: Folding a 2x4 array so that upper left is on top
X491 A little train puzzle: *
X492 Domino frames: With 24 dominoes, make three 5x5 frames
X493 Snuffing doing: An unsolved trick puzzle he received in the mail
X494 Missing words:
S485, S486, S487, S488, S489

+59(20)304
X495 The asylum gambit: Reconstruct Black's 15th move, given the position after
X496 Spending his tenpence: *
X497 A rail problem: *
X498 The king-maker: Expanding words
S490, S491, S492
S493 (no solution yet; see below, following S503)
S494, SZ19.1

+59(20)404
X499 A rook puzzle: 19-move rook path e6 to f6 on 10x10
X500 The seven applewomen: * trick
X501 Hexagon to square: Dissection in six pieces
X502 Letter pairs: 8-letter word with each letter occurring twice
X503 Current coinage: a+b+c+d+e = c+f+g+h+i+j+k+l, 11 coins and one duplicate
S495, S496, S497, S498

+59(20)504
X504 A motor-car journey: Count routes h8 to a1 avoiding c1,d4,e7
X505 The seven children: Odds that perm of {a,a,a,a,b,b,b} is b...b
X506 A charade:
X507 A day's sport: *
X508 Mental arithmetic: Multiply 993 x 873 in a few seconds
S499, S500
S501 [He seems to have forgotten his 5-piece dissection in P391=MP108]
S502 REAPPEAR(!) [A reader later sends 10-letter ARRAIGNING, INTESTINES, p276]
S503, S493

+59(20)535
S504, S505, S506, S507
S508 Use xy=(x-a)(y+a)+a(y-(x-a)): 873x993 = 872000+7x121
`["Perplexities," unavoidably held over, will appear next month.]'

+60(20)88
X509 Punctuation: If is is not is ...
X510 A cryptic monogram: Rebussy
X511 The clerk's mistake: As he reinstated as herein stated ...
X512 Changing the suit: Dissect spade to heart

+60(20)184
X513 In memoriam: Chess puzzle with pieces in shape of a cross
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X514 Binks's good point: A word puzzle
X515 A peg puzzle: On 7x7, move 3 of 10 pegs to make 5 lines of 4
X516 The flocks of sheep: *
X517 ..... la guerre: APRES ...
S509, S510, S511, S512

+60(20)276
X518 The damaged measure: Find Golomb ruler of length 33 with 8 marks
 ["A new puzzle that is interesting me very much at the time of writing,
 and I have not yet got quite to the bottom of the mystery of the general
 solution." He illustrates length 13 with 4 marks.]
X519 The five vowels: Find a word with five consecutive vowels
X520 The twenty-five-up puzzle: [Reprise of Z08.16]
S513
S514 Asks if bOOKKEEper is only word with three successive doublets
S515, S516, S517

+60(20)521
X521 Changing places: Rook and bishop on 4x4 [a sequel to X380, which he
 now says has a 15-move solution]
X522 The repeated quartette: a x 365 = bcdebcde, maximize
X523 The Victoria cross: Dissect Maltese cross to square
X524 Another unsolved enigma:
X525 A walking puzzle: *
S518 1+3+1+9+2+7+2+6+2 = 33 = 1+1+1+1+6+6+6+6+5 [in X530 says at least 16 sols]
S519, S520

+60(20)452
X526 Counting out the blacks: [Reprise of X265]
X527 An enigma:
X528 The horseshoe puzzle: Into seven parts with two cuts [an old chestnut]
X529 A new street puzzle: 1+2+...+m = 2(1+2+...+n)
S521
S522 35 moves ["I have not yet succeeded in finding a shorter solution"]
S523 13 pieces [P369 had a similar but different cross allowing 5-piece answer;
 MP111 later gave a nice 7-piece dissection]
S524, S525

+60(20)578-580 Christmas Puzzles at a Club
Z20.1 The first losing-chess problem: White to play and lose [beautiful!]
Z20.2 Setting the chessmen: Fewest swaps to make correct [beautiful]
Z20.3 Odds and evens: Trick of wording
Z20.4 Riding in the wind: *
Z20.5 The seven circles: Compass construction
Z20.6 Weighing the baby: *
Z20.7 An alphabetical puzzle: Word containing {A,B,C,D,E,F,G,H,I}
Z20.8 A typewriter cryptogram: Substitution cipher
Z20.9 The six coins: English money
Z20.10 A square with four pennies: If you have the right design on your pennies
Z20.11 Alphabetical arithmetic: M x GIREATHNS = NEAGRTIHMS
Z20.12 The lettered square: 6x6 with no repeats in row/col/diag, 7 symbols OK
S526 [He discloses a curious law that demands further explanation!]
S527, S528, S529

+61(21)91-92
X530 The six cottagers: Cyclic Golomb ruler of length 21
X531 A little shopping: *
X532 Word-building:
X533 Bottle and cork: * [Reprise of X113]
X534 An enigma: [Also a note on X524]
SZ20.1, SZ20.2, SZ20.3, SZ20.4, SZ20.5, SZ20.6, SZ20.7, SZ20.8, SZ20.9, SZ20.10
SZ20.11 NIGHTMARES
SZ20.12 [Here he missed the 128 6-letter solutions, "diagonal latin squares"
 such as 012345
         350214
         541023
         203451
         124530
         435102 which exist for all n>3; see D\'enes/Keedwell book, 6.1]

+61(21)186
X535 The guarded chessboard: Can you cover and guard all with KQRRBBNN?
X536 Dividing by 37: Find 49129308213 mod 37 "by inspection in a few seconds"
X537 A Swastikaland map: Fewest colors, contains an intentional typo
X538 A deal in eggs: *
X539 Half the alphabet: 13-letter word, all letters different
S530, S531, S532, S533, S534

+61(21)278
X540 A cube paradox: Passing one cube through another
X541 Factory hands: *
X542 The garden bed: Largest rectangle inside triangle excluding a given point
X543 An unsolved enigma:
X544 Reversing the digits: Solve 123456789x mod 1000000000 = 987654321
S535 (see also below, following S549)
S536, S537, S538
S539 (see also below, following S549)

+61(21)370
X545 Counter solitaire: Peg solitaire 00000000/xxxxxxxx/xxxxxxxx, no diag moves
X546 The "Ark" reconstructed: Improvements on X524
X547 Word endings: Different ways to spell -tion
X548 Playing for marbles: * [A reprise of X349]
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X549 The tube stairs: Chinese remainders
S540, S541, S542
S543 (unsolved, but see note following S553)
S544


+61(21)443
X550 The patchwork quilt: Decompose into two congruent parts
X551 Two queer words: Transpose two letters and invert the meaning
X552 A wages paradox: *
X553 The queen and the chair: Another Victorian enigma with answer lost
S545, S546, S547, S548, S549
S535 Solved if bishops can be on the same color
S539 SUBORDINATELY (and AMBIDEXTROUSLY has 14)


+61(21)558
X554 Paper folding: Make regular hexagon within a square
X555 The four fours: Berwick's original version of the division skeleton X428
X556 The eight dominoes: In 4x4, no repeats in row/col/alldiag, max total pips
X557 Odds and evens: An obvious way to transmit a bit
S550, S551, S552
S553 (yet unsolved, see note following S562)
S543


+62(21)94
X558 Railway routes: Count simple paths
X559 Football results: Reconstruct scores from other tallies
X560 The missing vowel: Epigrams that use only one of the five vowels
X561 Army figures: *
X562 Some anagrams:
S554
S555 (corrected below, following S566)
S556, S557


+62(21)190
X563 A wheel fallacy: Zeno-like paradox
X564 A charade: [Reprise of X139]
X565 Buying buns: *
X566 Curious multiplication: The Rhind papyrus / Russian peasant method
S558, S559
S560, S561, S562, S553


+62(21)286
X567 Squaring a star: Dissect 6-pointed star to square, 5 pieces (Escott)
X568 Alphabetical sums: Actually an alphabetic division
X569 Mr. Grindle's garden: Max area of quadrilateral with sides {7,8,9,10}
X570 A new word chain: ADVERB, BASIC, CARD, DINE, ..., not nec in order
S563, S564, S565, S566, S555


+62(21)378
X571 Buying tobacco: *
X572 Another Victorian enigma: ["I will explain that ... my own solutions
 are in fact in print before the puzzles themselves are read by the public."]
X573 Find the factors: 1234567890 = a x b, min |a-b|
X574 A sad case of nur(s)itis: Decipher a line graph
S567, S568, S569, S570


+62(21)470
X575 Fox and geese: [Reprise of Z08.11]
 [The game is also known as Wolf and sheep, Hare and hounds; see X590 below]
X576 The two trains: *
X577 "Simple" arithmetic: *
X578 A charade:
S571
S572 (see also below, following S583)
S573, S574


+62(21)564-566 The Puzzle Cranks' Symposium
Z21.1 Reductions in price: Geometric ratio
Z21.2 Some word puzzles:
Z21.3 The circulating motor car: *
Z21.4 Railway shunting: ABCE -switch- E'FG => E'FG -switch- ABCE, engines E,E'
Z21.5 Dissecting the moon: 2D crescent with 5 straight cuts, max pieces
Z21.6 A Polish gamble: *
Z21.7 Pawns against pieces: White two moves at a time but has only pawns
Z21.8 Bruin goes shopping: Trick of words
Z21.9 A curious legacy: *
Z21.10 The circle and discs: Cover a unit circle with 5 disks radius r, min r
S575, S576, S577, S578


+63(22)65-66
X579 Folding a pentagon: In a square sheet of paper
X580 Exploring Mount Neverest: Traverse 100mi cycle, can carry 2 days' rations,
 walk 20mi/day [analogous to jeep on desert]
X581 Timing the motor-car: *
X582 A musical enigma: A note on four staves
X583 A new alphabet puzzle: Sets of words containing 25 letters, all distinct
SZ21.1, SZ21.2, SZ21.3
SZ21.4 (see also below, following S592)
SZ21.5, SZ21.6, SZ21.7, SZ21.8, SZ21.9
SZ21.10 "A little less than 2/3" [the exact value is 1/phi=(sqrt5-1)/2=.61803]


+63(22)164
X584 Three domino frames: In 4x4, six dominoes each, sums {6,12,18} [cf X492]
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X585 A clock puzzle: One hand is the square of the other, in (square) minutes
X586 An amusing definition: Trick
X587 Monkey and pulley: Satire on several classic chestnuts
S579
S580 (see also below, following S592)
S581
S582 "Don't be flat, be upright and be natural? "(see also below, after S587)
S583 DUCKS FROG VEX JIB WALTZ NYMPH [See SGB p7: 5-letter words don't do it]
S572


+63(22)278
X588 Cutting the cheese: Make regular hexagon by cutting a cube
X589 A critical vote: *
X590 Ancient "Fox and Geese": An old version with 17 geese on 3+3+7+7+3+3
X591 An old enigma:
X592 An exceptional number: ab x c = de, {a,b,c,d,e}={k,k+1,k+2,k+3,k+4}
S584
S585 (see also below, following S596)
S586
S587 (see also below, following S596)
S582 BACH [He missed it, tho knowing CPE's fugue on BACH]


+63(22)372
X593 A curious end-game: (probably by Loyd)
X594 The first "boomerang" puzzle: Chinese remainder acc to Nichomachus
X595 The five cards: ab x cd - e = ffff, {a,b,c,d,e}={1,3,5,7,9}
X596 A charade:
S588, S589, S590, S591, S592, S580
SZ21.4 reduced to 14 moves


+63(22)408
X597 The quinqueliteral: Five solutions to 5 queens on 5x5 in how many ways?
X598 Missing words:
X599 The four cubes: Solve 5^3+x^3=y^3+z^3 in integers
X600 Beheadings and curtailings:
X601 Distributing nuts: *
S593, S594, S595, S596, S587, S585


+63(22)541
X602 Marking a tennis court: Nice application of Chinese postman
X603 Two anagrams: [One of which reprises Z16.13]
X604 Another old enigma:
X605 The Mudbury War Memorial: *
S597, S598
S599 5^3+315^3 = 248^3+252^3, and he constructs many more examples
S600, S601


+64(22)48
X606 Digital squares: Eight equally spaced abc+def=ghi, {a,...,i}={1,...,9}
X607 Letter multiplication: a x bcdef = edafbc, no 0 or 5
X608 Folding a pentagon: An extension of X439
X609 Missing words: Actually expanding words
X610 A chess charade:
S602, S603, S604, S605


+64(22)186
X611 Perpetual check: The shortest such chess game
X612 Market transactions: *
X613 Two little paradoxes: Why does a mirror reverse left/right, not top/bottom
X614 An enigma:
S606, S607, S608, S609, S610


+64(22)290
X615 A plantation puzzle: Separate 20 points of 6x6 with six straight fences
X616 A word square: 6x6
X617 The new flag: Nonisomorphic digit triples (a,b,c) when (a,b,c)==(c,b,a)
X618 Puzzles in a garden: *
X619 A charade:
S611, S612
S613 [His explanation is not really convincing]
S614


+64(22)368
X620 The switch puzzle: 12-letter word reproduces itself vertically in 12 moves
X621 A rising politician: Expanding words
X622 An end-game: (by Bolton) Q and N versus Q and P
X623 Find the coins: *
S615, S616
S617 [Burnside's Lemma would give (1000+100)/2 immediately]
S618, S619


+64(22)439
X624 Eight queens: Move 3 so that 11 cells are unattacked
X625 The flock of geese: *
X626 Twenty matches: 7 enclose area x, 13 enclose area 3x [not a good puzzle!]
X627 The solitary seven: In a division skeleton
X628 A rebus: No, it's actually three words that anagram each other
S620, S621
S622 [See correction following SZ22.10 below]
S623


+64(22)619-622 A Budget of Christmas Puzzles
Z22.1 Find their ages: Trick of wording
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Z22.2 The donkey-cart journey: * [similar to X443]
Z22.3 Imitative chess: Both players make the same moves until White mates
Z22.4 The knight's century: Find a path that sums to 100
Z22.5 A charade:
Z22.6 The stone pedestal: *
Z22.7 The old Fifteen Puzzle: Trick to solve 15-puzzle with counters not blocks
Z22.8 Cricket averages: Fallacy of statistics
Z22.9 The rectangular field: * [with sexist remarks]
Z22.10 Five figures from five pieces: Square, Greek cross, rectangle, diamond,
 and right triangle
S624, S625, S626, S627, S628

+65(23)103-104
X629 An instructive position: Chess ending, Q and N versus Q
X630 A poetical pot-pourri: Collage from lines of famous poems
X631 Pat and the pig: Pat can run twice as fast, but always goes toward the pig
X632 The keg of wine: * Mixing water and wine
X633 Anagrams:
X634 Adding their cubes: 407 = 4^3+0^3+7^3; find a case without 0
SZ22.1, SZ22.2, SZ22.3, SZ22.4, SZ22.5, SZ22.6
SZ22.7 Exchange 6 with 9 ["I have not looked for the shortest"]
SZ22.8, SZ22.9, SZ22.10
S622

+65(23)208
X635 Twenty-six matches: Divide 6x6 into 2 same-shape pieces,
 one with d5 and f2, the other with b5 and c3
X636 Puzzling legacies: * [A typo will be corrected next month]
X637 A magic-square trick: Quibbles of wording
X638 A picture presentation: How many subsets of a 10-element set? [Trivial]
X639 Missing words:
S629, S630, S631, S632, S633
S634 1^3+5^3+3^3=153 [Hardy hated this puzzle!]

+65(23)311-312
X640 The square table-top: Dissect 12x12+15x15+16x16 into 25x25
X641 A complete skeleton: (typo corrected later, see S641 following S648)
X642 A word square: 5x5
X643 Baxter's dog: * [a companion to X464]
X644 WRONG to RIGHT: Word ladder
S635, S636, S637, S638, S639

+65(23)405
X645 The domino rectangle: 28 dominoes in 8x7 with row sums 21 and col sums 24
X646 Palindromic square numbers: 264^2=69696, but want an even number of digits
X647 More expanding words:
X648 The puzzle of the runners: *
S640, S641, S642, S643
S644 (see also below, following S651)

+65(23)538
X649 Drawing an oval: * (with string and pins)
X650 Cricket scores: *
X651 Block and pin puzzle: A companion to X313, 16 chessmen with <6 movable
S645
S646 The smallest he knows is 836^2=698896 [and it is indeed smallest]
S647, S648, S641

+65(23)627
X652 The garden path: * (compute its area, corner to corner)
X653 Word multiplication: A x STEM = TEAMS, no zero
X654 A new measuring puzzle: (inf,0,0)->(inf,8,x) or (inf,x,8), cap (inf,15,16)
X655 Beheading:
S649, S650
S651 (see also below, following S660)
S644 WRONG,PRONG,PRONE,DRONE,DIONE,DION'S,SIONS,SIGNS,SIGHS,SIGHT,RIGHT
 [It has proper names and apostrophes, which he decided to allow because of
 the difficulty. My favorite solution without such liberties is
 WRONG,PRONG,PRONE,PHONE,SHONE,SHINE,WHINE,WHITE,WHITS,WAITS,WARTS,WARNS,
 BARNS,BURNS,BURNT,BURET,BERET,BEGET,BEGOT,BIGOT,BIGHT,RIGHT; there's
 a shorter one if you allow BRUNG.]

+66(23)104
X656 The six-sided figure: Bordered by 9 matches
X657 A cryptic sentence: A rebus
X658 A running puzzle: *
X659 An easy enigma:
X660 Concerning a cube: *
S652, S653
S654 Observes that one can get any multiple of the gcd of the two capacities
S655

+66(23)126
X661 Disordered counters: Sliding blocks ijcfg   abcde
                                         0 0 -> 0 0   [when you straighten
                                         dehab   fghij   out his diagram]
X662 Beeswax: Alphametic
X663 My Lady's garden: *
X664 The runner's refreshment: A terrible mathematical pun
S656, S657, S658, S659, S660, S651

+66(23)289
X665 The nine bridges: Count Eulerian paths

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X666 Word building: Historical expanding-words puzzle
X667 A fence problem: *
X668 Alphabetical arithmetic: ab x c = de, fg - de = hi, {a,...,i}={1,...,9}
X669 An enigma: (by Voltaire)
S661 Achieves 40 moves [the obvious lower bound]
S662, S663, S664


+66(23)380
X670 A domino star: chains of length 3,4,3,4,3,4,3,4 with 21 pips each
X671 Crossing the ferry: 6 people, many forbidden combos
X672 An old enigma:
X673 Three nines: The largest number achievable with three nines
X674 A charade:
S665, S666, S667, S668, S669


+66(23)526
X675 Chess possibility: Show that a strange position could indeed occur
X676 A legacy puzzle: *
X677 Dividing the board: *
X678 A charade:
X679 A queer division: Trick of wording
S670, S671, S672
S673 [Here he doesn't allow factorials of factorials, only of explicit digits,
 for (weak) reasons that he explained in the Weekly Dispatch 1900.02.04;
 but below in S924 he has evidently changed his mind]
S674


+66(23)652-654 Christmas Problems. From the Proceedings of the Puzzle Club
Z23.1 Pocket money: *
Z23.2 The staircase race: Chinese remainders
Z23.3 The cost of a suit: *
Z23.4 Postage-stamps: a+b+c=c+d+e=e+f+g=g+h+a, min and max, given that
 {a,...,h} is a subset of {1,2,3,4,5,6,8,10,12,14,16,18,20,24,60,120,240,480}
Z23.5 An old enigma:
Z23.6 Making a chessboard: From an odd shape, cut it in two pieces
Z23.7 Queer chess: Supply Black moves for mate in 4, if the White moves are
 f3, Kf2, Kg3, Kh4.
Z23.8 The clown clock: Switch the hands and the time is correct
Z23.9 The nine barrels: How many 3x3 Young tableaux?
S675, S676, S677, S678, S679


+67(24)105-106
X680 A motor-ride puzzle: 16-move rook tour a8-a8, not using links d6-d7, d5-e5
 [Note that the 16-move solution to AM320 does not satisfy this condition]
X681 The queen and the knight: Probability that neither attacks the other
X682 A common divisor: Solve 480608 mod x = 508811 mod x = 723217 mod x
X683 A charade:
X684 A digital difficulty: abcdefghij a mult of 1,...,18; {a,...,j}={0,...,9}
SZ23.1, SZ23.2, SZ23.3
SZ23.4 (see also below, following S693)
SZ23.5, SZ23.6, SZ23.7 e6, Qf6, Qf3ch, Be2mate, SZ23.8, SZ23.9


+67(24)196
X685 Changing places: Two knights, two bishops on either side, 8x8
 [another in a series of similar puzzles, see X521]
X686 Palindromic sentences: Form one from {A,A,A,A,E,E,G,G,I,I,L,N,N,R,R}
X687 Missing words:
S680
S681 4/9
S682 [He doesn't use Euclid's algorithm, he factors completely;
 perhaps he did this because most of his readers know only factoring?]
S683
S684 (held over intentionally; see the solution following S693)


+67(24)320
X688 Simple division: a...yz = 3 x za...y
X689 The triangular plantation: Count noncollinear triples in a triangular grid
X690 Dollars and cents: *
X691 A puzzle with draughts: 10 in 8x8, 5 lines of 4, move six and make another
X692 Threes and sevens: All digits 3 or 7, divisible by 21, sum of digits also
X693 A word square: 5x5
S685, S686, S687


+67(24)424
X694 A general election: How many nonnegative solutions to w+x+y+z=615?
X695 An enigma:
X696 An epitaph (A.D. 1538): Family relations
X697 For juveniles: *
S688, S689, S690, S691, S692, S693, S684, SZ23.4


+67(24)516
X698 A reduced knight's tour: Bergholt found a 3x10, now find them all
X699 Factorizing: Give two factors of 10^12+1 and 10^102+1
X700 Selling eggs: *
X701 A rustic charade:
X702 Apples and oranges: [Reprise of X265 and X526]
S694, S695, S696, S697


+67(24)638
X703 The surveyor's problem: Chinese postman
X704 A curious progression: In what familiar sequence is a_1+...+a_5=153?
X705 The "antique" shop: Missing words
X706 Two conundrums:
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S698 [He hints at the peculiar reversal symmetry in two of the cases]
S699, S700, S701, S702


+68(24)97
X707 A prohibition poser: Measuring liquid (120,0,0,0) -> (x,1,1,118-x),
 cap (120,7,5,inf), cannot pour into the first component
X708 Verbal arithmetic: Four alphametics, e.g., TWO x TWO = THREE
X709 Scoring at billiards: *
X710 The squares of veneer: Dissect 25x25 into 24x24 and 7x7
X711 A charade:
S703, S704, S705, S706


+68(24)214
X712 An amusing chess puzzle: (by Morrow) don't allow the pawn to queen
X713 A new word chain: BAG -> AGE -> GEM, etc.
X714 Equal perimeters: Six integer-sided right triangles
S707, S708, S709, S710, S711


+68(24)715
X715 Turning the die: [Identical to 25-up, thus another reprise of Z08.16]
X716 Digits and primes: Prime numbers with smallest sum, using {1,...,9}
X717 Striking out stars: Cover all of 7x7 by straight lines, from c6 to c6
X718 A charade:
X719 The ADINCO puzzle: Wordplay
X720 Paying the toll: Quibble
S712
S713 (see also below, following S724)
S714


+68(24)422
X721 Changing places: White/Black pieces all change, pawns only as necessary
X722 Pickleminster to Quickville: *
X723 The dishonest dairyman: Insert the letter I to make a sentence
X724 Domino fractions: Discard doubles and blanks, then make three sets
 of five fractions that each sum to 10
S715, S716, S717, S718, S719, S720


+68(24)530
X725 Transferring the counters: 6-peg Hanoi tower, 15 disks
X726 Prohibition again: Like X707 but allow pouring back into the barrel
X727 A draughts problem:
X728 The tramps and the biscuits: Like CP114, but nothing for dog on last day
S721, S722, S723
S724 1/3+6/1+3/4+5/3+5/4 = 2/1+5/1+2/6+6/3+4/6 = 4/1+2/3+4/2+5/2+5/6 = 10
S713


+68(24)668-670 The Major's Christmas Puzzles
Z24.1 John and Mary: * [a slight variation of X448]
Z24.2 The damaged engine: *
Z24.3 Buried fruits:
Z24.4 A heptagon puzzle: a+b+c=c+d+e=...=m+n+a=19, {a,...,n}={1,...,14}
Z24.5 A problem for surveyors: *
Z24.6 A plantation puzzle: 10 points, 5 lines of 4, as close as possible
 to Newton's 9 points in 10 lines of 3
Z24.7 Missing words:
Z24.8 Buying fruit: *
Z24.9 The doctor's chess puzzle: Shortest legal game in which the White queen
 is not in line with or protected/attacked by anything else
Z24.10 A word square: 6x6
Z24.11 The magisterial bench: Perms of {a,a,b,b,c,c,d,e,f,g}, no adj equalities
Z24.12 The thirteen diamonds: 8x8 into 13 one-sided pieces, edges must match
S725, S726
S727 [Amazing!]
S728


+69(25)105-106
X729 A curious chess puzzle: (by Shinkman and Wurtzburg)
X730 Word rings: ABCD -> CDEF -> EFAB [cf X419]; consider semantics too
X731 Difference squares: 3x3 with a+b-c constant in row/col/diag
X732 A charade:
SZ24.1, SZ24.2, SZ24.3
SZ24.4 [He speaks as if his answer, (1,13,5,12,2,11,6,10,3,9,7,8,4,14),
 were unique; but (1,14,4,13,2,12,5,8,6,10,3,9,7,11) is another solution,
 and so is (1,14,4,13,2,10,7,9,3,11,5,8,6,12); I didn't continue looking.
 This problem, like X285, is related to generalizations of "graceful graphs"
 in which we want to label the vertices {1,...,n} so that the edge sums
 are distinct and form an interval]
SZ24.5, SZ24.6, SZ24.7, SZ24.8
SZ24.9 e3 e6; h4 Qh4; Rh4 h5; Qf3 Kd8; Rh5 Rh5; Qh5 f6
SZ24.10, SZ24.11
SZ24.12 [There are actually four solutions. If we represent the given one as
 ABBBBBCC                                              FFGGGGCC
 ADDEEBFC                              KK              FJJ  GAC
 AGHHIBFC                             IIK              FJ   GAC
 AGHIIJFC  we can rotate inner part to IIH and/or change outer to FJ   GAC.]
 AGKIIJFL                             IHH              FB   GAL
 AGKKJJFL                             EE               FB   DDAL
 MGGGGFFL                                              MBBBBBAL
 MMMMLLLL                                              MMMMLLLL


+69(25)212
X733 Swastika magic square: 5x5, don't put primes or 1 into designated cells
X734 A legacy puzzle: Twins not anticipated in the will
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X735 Triangles and square: Dissect two congr equilateral triangles to a square
X736 A puzzle with cards: Construct an appropriate perm, ACE, TWO, ... [cf X41]
X737 Missing letters:
S729, S730, S731, S732

+69(25)294-295
X738 The cross-word clown: [Describes crossword puzzles as "A curious craze"
 from America "that will probably die as rapidly as it has sprung up"]
X739 Dividing by eleven: How many perms of {1,...,9} are 9-digit nos div by 11?
X740 A buried proverb:
X741 The perplexed banker: Wants {1,...,1000} as subset sums of set
X742 A charade:
S733
S734 Due to summertime [daylight savings time], the firstborn was born later
 than the other
S735, S736, S737

+69(25)424
X743 Novel cross-word puzzle: Letters given, clues in random order
X744 Exploring the desert: 9 cars, no depots [and he neglects to say that
 they all should return home]
X745 Cryptic verse:
X746 Lamp signals: How many ways to place up to three pegs of three different
 colors into a 2x3 box, translations being considered equivalent
X747 An old charade:
S738
S739 [A typo is corrected below in X774]
S740
S741 {1,2,4,...,256,489} is one way [and {1,1,...,1} is another of many]
S742

+69(25)527
X748 Another cross-word curiosity: Each letter of alphabet used exactly once
X749 A match-boarding order: Solve $297 = 8x+a(x-1)+x(x+2)+c(x-3)$, $a+b+c=8$
X750 An enigma:
X751 Missing words:
X752 Easy draughts:
S743
S744 [An unsatisfactory answer; he implicitly forbids one car from waiting for
 another before returning home. Otherwise it is possible to go much further,
 using only 7 cars! I guess waiting is thought to be equivalent to
 "making a depot of petrol"]
S745, S746, S747

+69(25)634
X753 Another cross-word variant: Gives lengths, not locations; fills in many
X754 The fly and the motor-cars: *
X755 Double-barrelled conundrums: [Ouch]
X756 A little match puzzle: Remove some matches, leave four triangles
S748, S749, S750, S751, S752

+70(25)107-108
X757 The British lion: Crossword puzzle in lion shape
X758 De Morgan and another: *
X759 The donjon keep window: A development of problem CP36, to divide a
 square window into eight subwindows whose sides are also equal
X760 The two digits: When is ab = a op b?
X761 Missing words: [very similar to X494]
X762 A chess ending: (by Campbell)
S753, S754, S755, S756

+70(25)202
X763 Easy draughts:
X764 A rowing puzzle: *
X765 Missing words:
X766 Sheep stealing: *
X767 Find the word: [Reprise of X488]
S757, S758, S759
S760 (see also below, following S771)
S761, S762

+70(25)320
X768 Cross-figure puzzle: Each cell to contain a single nonzero digit; sums
 are given as clues, in the four directions -, |, \, /
X769 Two cyclists: *
X770 A charade:
X771 Another little match puzzle: Move three and enclose five cells
S763, S764, S765, S766, S767

+70(25)423-424
X772 A fine chess ending:
X773 Packing cigarettes: Tighter than 8 rows of 20
X774 Dividing by thirty-seven: [An extension of X739]
X775 Missing words:
X776 The sapphire brooch: [Reprise of Z15.1]
S768, S769, S770, S771
S760 $64 = \sqrt{4^6}$; amazingly $71 = \sqrt{1+7!}$

+70(25)524-525
X777 Les quadrilles: Classic problem but with no blanks allowed at outer edges
X778 Squares and cubes: $x^2-y^2 = m^3$, $x^3-y^3 = n^2$
X779 Multiplication dates: 25 Jan 25 and 5 May 25 have Month x Day = Year
X780 Odds and evens: A skeleton division with some parities specified

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X781 Buried animals:
S772, S773, S774, S775, S776


+70(25)668-670
Z25.1 Twenty questions: Used to deduce a 6-digit number
Z25.2 Cupid's arithmetic:
Z25.3 A game with matches: Miser\'e Nim starting with {1,2,3,4,5}
Z25.4 Age puzzle: a_1^2+...+a_9^2=(dad's age)^2, a's in arithmetic progression
Z25.5 Counting the triangles: In pentagon+star
Z25.6 A musical puzzle: God Save the King disguised with double-sharps etc.
Z25.7 Word stairs:
Z25.8 Three motor-cars: *
Z25.9 An enigma:
Z25.10 Dissecting the letter E: Cut in five pieces and make a square
Z25.11 A charade:
Z25.12 A chain puzzle: Extends X93, large and small links alternate
S777, S778, S779
S780 (see also below, following S785)
S781


+71(26)103-104
X782 A prime star: Made with 10 "primes" [he believes that 1 is "prime"]
X783 The family ages: *
X784 A tiny cross-word puzzle: 3x3 [joke]
X785 The shortened word chain: Revisits X570, asking to make it short
SZ25.1, SZ25.2, SZ25.3, SZ25.4, SZ25.5, SZ25.6, SZ25.7, SZ25.8, SZ25.9
SZ25.10, SZ25.11, SZ25.12


+71(26)208
X786 The treadmill: A chess problem by Reichhelm
X787 Life's requirements: Missing words
X788 The squares of veneer: A big improvement on S710
X789 Correcting a table: Errors of omission/commission in Ozanam's prime table
S782, S783, S784, S785, S780


+71(26)312
X790 Easy draughts: (by Beattie)
X791 An old charade:
X792 Digital arithmetic: Another puzzle in pounds, shillings, pence
X793 A new cross puzzle: Dissect Greek cross into smaller one and square
X794 Domino sequences: With double nines
S786, S787, S788, S789


+71(26)416
X795 A knight's path: step 1 on a1, step 4 on a2, ..., step 64 on a8
X796 Another skeleton: Division that specifies only one digit (a zero)
X797 Octagon to square: Dissect one to the other
X798 Queer division: x mod 45 =4, x mod 454 = 45, ..., x mod 45454 = 4545
X799 An old charade:
S790, S791, S792, S793, S794


+71(26)521-522
X800 Ways of voting: Three items, each item is For or Against or Neither
X801 An old enigma:
X802 A deal in turkeys: *
X803 A digital skeleton: Division in which the hidden digits are {1,...,9}
X804 Card shuffling: What is the order of the Monge shuffle of 14 cards?
S795, S796
S797 (see also below, following S818)
S798, S799


+71(26)628
X805 Archery: Reach 100 with fewest elements of {16,17,23,24,39,40}
X806 Digits and squares: abcde is a square, ab*de is a cube
X807 Domino solitaire: Extend Z08.14 to allow building 4 ways from first double
X808 Horses and bullocks: *
S800, S801, S802, S803, S804


+72(26)103-104
X809 A carpet puzzle: Make a square carpet from 40x33 minus 8x3
X810 The pedestrian passenger: *
X811 Naming his sons: Missing words
X812 Cube differences: x^3-y^3=1234567
X813 Knight errantry: Chess puzzle (by Carpenter)
X814 Palindromes: Beginning/ending with A, B, ..., Z, as many as possible
S805, S806
S807 A conjectured optimum of 485
S808


+72(26)211-212
X815 The shortest draughts game: Twelve moves, no captures, White is then stuck
X816 The barman's puzzle: *
X817 The paper ribbon: * (find its approximate length, knowing its volume)
X818 Sunrise and sunset: Missing words
S809, S810, S811, S812, S813, S814


+72(26)315-316
X819 The entangled scissors: "The old scissors and string puzzle"
X820 Geometrical progression: 1+a+a^2+...+a^n = x^2
X821 The puzzle of the iceman: Missing words ending -ICE
X822 The dissected chessboard: "An ancient and familiar fallacy" that 8x8=5x13;
 use the same two pieces to prove that 64=63
X823 Maximum moves in chess: "In a possible (however improbable) position"
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S815, S816, S817, S818
S797 A nice 5-piece dissection


+72(26)419
X824 Digital puzzle: abc divisible by (a+b+c)^2, {a,b,c} distinct
X825 Subscription puzzle: *
X826 An absolute skeleton: Division skeleton with not-too-nice restrictions
X827 An old enigma:
S819, S820, S821, S822
S823 His solution has 90 moves for White


+72(26)526
X828 Another target puzzle: Cut {1,1,1,2,2,3,3,5,5,10,10,10,20,20,20,25,25,50}
 into three sets of six, each having the same sum [is equiv to X212!]
X829 Curious square numbers: *
X830 Moving counter puzzle: Halma on chessboard, swap 10 with 10, leaps only
X831 Missing word puzzle: Each missing word used twice in each sentence
X832 Magic fifteen puzzle: Starting with 14/15 swapped, go to magic square
 [AM403 was the same problem but without the swap; it has a nicer answer]
S824 (corrected below, following S832)
S825
S826 (see also below, following S832)
S827


+72(26)664-666 Uncle Jasper's Puzzle Book
Z26.1 Monkeys and nuts: Chinese remainder
Z26.2 The keys and ring: Cut out of a single piece of cardboard
Z26.3 The Arab's puzzle: abcd x efghi = acgefhibd, {a,...,i} = {1,...,9}
Z26.4 Blowing out the candle: Through a cone
Z26.5 A motoring puzzle: *
Z26.6 Find the squares: x+100 = m^2, x+164 = n^2, x>0
Z26.7 My South American tour: A to Z in longest simple path [Interesting graph]
Z26.8 The Spaniard's chess puzzle: Shortest game leading to White pawns on
 h2 h3 h4 h5 h6 h7 and kings on their original squares, no other pieces
Z26.9 A juvenile poser: L to N trick [not great]
Z26.10 Buying peaches:
Z26.11 The Tower of Pisa: Sum a geometric series [bouncing ball]
Z26.12 Ching's cutting-out puzzle: Fold a Greek cross, make one cut,
 get four pieces that yield a square
S828, S829
S830 A simple impossibility proof
S831, S832, S824, S826


+73(27)105-106
X833 Easy draughts:
X834 Out and home: *
X835 An old enigma:
X836 Alphabet words: A five-syllable word represented by five letters
X837 A tiny magic square: 3x3 using {1,2,3} in each row
SZ26.1, SZ26.2
SZ26.3 6543 x 98271 = 642987153
SZ26.4, SZ26.5, SZ26.6
SZ26.7 There are longest paths leaving out any one of 11 vertices
SZ26.8 (see also below, following S851)
SZ26.9, SZ26.10, SZ26.11, SZ26.12


+73(27)210
X838 A curious end-game:
X839 Word reversals and reflections: Handwritten word, same when rotated 180
X840 Blindness in bats: Simple statistics
X841 Dissecting the letter E: In four pieces if you can turn them over
S833, S834, S835
S836 XPDNC (expediency)
S837


+73(27)305
X842 The shock: What is wrong with this story?
X843 The eight knights magic: Eight paths {1,2,...,8}, row/col/diag sums all 36
X844 Table-top and stools: Loyd's 4-piece solution to X333=AM157
X845 Find the triangle: Sides and height are {x,x+1,x+2,x+3}
X846 Eliza's surname: * (Logic puzzle, an extension of "Dutchmen's wives"
S838
S839 "bung"
S840, S841


+73(27)420
X847 Danger signal puzzle: Crossword with subsets only [cheap]
X848 A queer number: A square when read forward, backward, and upside down
X849 An old enigma: A E I O U
X850 The motor-car maker's profit: *
X851 Heptagon and square: A 10-piece dissection by Wotherspoon
S842, S843, S844, S845, S846


+73(27)525-526
X852 The cancelled cheque: ab, cd, ef are squares, and so is abcdef/113
X853 The ambiguous clock: Both hands identical; when is time ambiguous?
X854 A phonetic exercise: Extension of X836
X855 Securing the almond: A Nim-like game with real-number moves
S847
S848 961, 169, 196
S849, S850
S851 (see also below, following S865)
SZ26.8 reduced from 35 to 32 moves
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+73(27)630
X856 Luck in adjudications: Mate in 3
X857 Accommodating squares:  abc = m^2, def = n^2, abcdef = p^2, no 0s
X858 Making a square: From embellished cross 1+3+5+3+1
X859 The omnibus ride: *
X860 A sequel to the iceman: Sequel to X821
S852, S853, S854, S855


+74(27)861
X861 Blocks and squares: a^2+x=b^2, b^2+x=c^2, c^2+x=d^2+4, minimum x
X862 Sharing the apples: *
X863 A charade:
X864 The guarded chessboard: Sequel to Z08.3: 12 sols to 5-queens, 4 in common
X865 The three drovers: *
S856, S857, S858, S859, S860


+74(27)200
X866 Easy draughts problem: (by Muir)
X867 The tank puzzle: *
X868 Tremendous all: Missing words -TRE
X869 A match puzzle: Hexagon -> two diamonds
X870 Proportional representation: How many possible ballots?
S861, S862, S863
S864 All but two are covered by c4 d8 g3 h7
S865
S851 Says that nine-piece solutions have been found, but he doesn't show them


+74(27)318
X871 The Grand Lama's problem: Sequel to X58, make another such problem
X872 New match puzzle:
X873 Missing words:
X874 Equal fractions: Like a/b=c/d=ef/ghi, {a,...,i}={1,...,9}
X875 An enigma:
S866, S867, S868, S869, S870


+74(27)417
X876 Conditional magic square: 5x5 with {1,3,...,25} in the central diamond
X877 The conspirators' code: An alphametic
X878 Boxes of cordite: Largest number not 15x+18y+20z in nonnegative integers
X879 Two more queer words: A sequel to X551
S871, S872, S873
S874 He cheats with .2/1 = .6/3 = 97/485
S875


+74(27)521
X880 Curious cross-words: All words have the form ---IC
X881 A queer position: How could both rooks infiltrate enemy territory?
X882 A return journey: *
X883 Drop letter puzzle: A Coleridge quote minus its vowels
X884 The stopped clock: Hour hand = minute hand; second hand near 11 sec
S876
S877
S878
S879


+74(27)670-672 A Batch of Easy Puzzles
Z27.1 Two anagrams:
Z27.2 Division of labour: [Reprise of X240]
Z27.3 Fathers and sons: Relationships
Z27.4 Hens and eggs: Hen-and-a-half again
Z27.5 Where is it?: Trick [No W here]
Z27.6 A match puzzle:
Z27.7 The cyclist and the eggs: Trick of wording
Z27.8 More magic numbers: [Reprise of X137]
Z27.9 The Christmas presents: *
Z27.10 An egg puzzle: *
Z27.11 The square of soldiers: *
Z27.12 The two D's: Rebus, horrible pun
Z27.13 Clipping the coins: *
S880
S881 (see also below, following SZ27.13)
S882, S883, S884


+75(28)103-104
X885 Two domino squares: 10x10 and 6x6 frames, all 8 sides should have same sum
X886 Varied spellings: For the long vowel A
X887 The birth of Boadicea: *
X888 Chess or Draughts: From the same position White mates in two / wins in two
X889 Diminishing words: UNDESIRABLE, UNREALIZED, LAUNDRIES, ...
SZ27.1, SZ27.2, SZ27.3, SZ27.4, SZ27.5, SZ27.6, SZ27.7, SZ27.8, SZ27.9
SZ27.10, SZ27.11, SZ27.12, SZ27.13, S881


+75(28)208
X890 A Monmouth tombstone: How many ways does it spell HERE LIES JOHN ...
X891 An old enigma:
X892 A triangle puzzle: Sides {x,x+1,x+2}, area divisible by 20
X893 Changed heads: Word play
X894 The moving staircase: Sequel to X452
S885
S886 (see also below, following S904)
S887, S888, S889
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+75(28)296
X895 Eight motor-cars: 8-puzzle, 123/405/678 -> magic square
X896 Another street puzzle: The perm 1,2,...,n -> 2,4,...,n,...,3,1 has the
 unique fixed point 181; what is n?
X897 Missing words:
X898 Easy draughts:
X899 The year 1927: Belatedly, solve x^y - y^x = 1927
S890, S891, S892, S893, S894


+75(28)416
X900 The letter L: How many sols to a+b+c+d+e=e+f+g+h+i, {a,...,i}={1,...,9}?
X901 Another age puzzle: *
X902 Economic chess problems: (by Loyd)
X903 A garden puzzle: What is largest quadrilateral area, sides {10,12,16,20}?
X904 Words with one tail: DISTEND, PORTEND, ...
S895, S896, S897, S898, S899


+75(28)522
X905 A framed knight's tour: Find a closed tour on 10x10 - 4x4 in center
X906 A digital puzzle: 1234+1243+...+4321 [Bhaskara]
X907 A hidden proverb: In king's tour of 6x6
X908 A leap year puzzle: When next will February have five Wednesdays?
X909 Flooring figures: L1 4s 8d = 148 x 2 pence; L1 5s 0d = 150 x 2 pence; ...
S900 (see also below, following S913)
S901, S902, S903, S904, S886


+75(28)613
X910 An effervescent puzzle: Count perms of {E,F,F,E,R,V,E,S,C,E,S} with no EE
X911 Water measurement: (inf,0,0) -> (inf,2,*) or (inf,*,2) or (inf,1,1),
 capacities (inf,7,11) [see X654]
X912 Cremated animals: Word play
X913 Summing the digits: 123456789+123456798+...+987654321 [cf X906]
S905, S906, S907, S908, S909


+76(28)104
X914 Bishops and their sees: Move 14 from given position so that none attack
X915 Letter figure puzzle: [not memorable]
X916 Slim dominoes: Chains of lengths 7, 5, 4, 12 with equal sums [not great]
X917 Football news:
X918 Squaring the digits: abcdefghi = square, {1,...,9}, closest to 123456789
S910, S911, S912, S913, S900


+76(28)208
X919 The twenty-two bridges: Reprise of Euler
X920 A solitaire puzzle: Peg solitaire from all-but-2 to only-2
X921 Finding a birthday: *
X922 The five vowels: Longest case where XaY, XeY, XiY, XoY, XuY are all words
S914, S915, S916, S917, S918


+76(28)312
X923 The king's march: How many ways from e1 to e8 in 8 moes?
X924 Expressing 24: 24 = 22+2 = 3^3-3 = 8+8+8; other ways?
X925 A new magic square: 3x3 with 4-digit numbers; digits are {9.1,9.2,9.3,9.4}
X926 Hidden quotation: Change one letter in each word to restore it
X927 The egg cabinet: *
S919
S920 See also X934, reporting 20-move solutions by Moore
S921, S922


+76(28)405
X928 Easy draughts: (by Lyman)
X929 Squares and cubes: Sequel to X778: x^2+y^2 = m^3, x^3+y^3 = n^2
X930 An old enigma: A rebus
X931 An old card trick: Once again, card spelling ACE, TWO [X736]
S923
S924 24 = 4! x 4/4 = (5-5/5)!, etc. (see also below, following S936)
S925, S926
S927 (corrected below, following S931)


+76(28)513
X932 A wily chess puzzle: Sneaky trick
X933 A clock puzzle: Hands at right angles
X934 Another solitaire puzzle: From all-but-1 to only-1 in 16 moves
X935 A chicken puzzle: *
X936 Heard on the racecourse:
S928, S929, S930, S931, S927


+76(28)604-606 Little Things That Puzzle
Z28.1 How is the rat moved?: Trick cards
Z28.2 A house of cards burgled: Card trick
Z28.3 A coin trick: How to identify a coin blindfolded
Z28.4 Very mental arithmetic: Forcing a sum
Z28.5 A billiards puzzle: *
Z28.6 How she knew: A preposterous conundrum
Z28.7 How to hold an eel:
Z28.8 A match trick:
S932, S933, S934, S935, S936
S924 24 = (1+sqrt(1/.\dot1))! = (7-sqrt(7/.\dot7))!


+77(29)62-63
X937 Domino squares: Three loops [not memorable]
X938 The reapers' puzzle: *
X939 Alphabetical order: The longest word of increasing letters
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X940 The Bath chair: *
SZ28.1, SZ28.2, SZ28.3, SZ28.4, SZ28.5, SZ28.6, SZ28.7, SZ28.8


+77(9)208
X941 A necklace problem: How many with 8 beads and two colors?
X942 Anagrammatic verse: Anagrams of a familiar nursery rhyme
X943 Equal addition: Trick of wording
X944 An episcopal visitation: Bishop's tour on 10x10 [sequel to P16 = AM325]
S937, S938
S939 BEFILMS is his best [Eckler misses this one but has AEGILOPS]
S940


77(29)312
X945 Cross-number puzzle: Has a more traditional format than X768
X946 Missing words: All words spelled the same
X947 Halfpennies and tray: How many unit circles fit in circle of diameter 9?
X948 Juggling with digits: a+b = c, d-e = f, gxh = ij, {a,...,j}={0,...,9}
S941 "General solution ... difficult, if not impossible" [but MacMahon had
 in fact solved it long before]
S942, S943
S944 He conjectures that 23 moves is shortest


+77(29)416
X949 Easy draughts: (by Brooks)
X950 The flagon puzzle: *
X951 Finding a square: Which three of six given numbers sum to a square?
X952 Queer addition:
X953 Anagrams:
S945, S946
S947 (see also below, following S962)
S948


+77(29)482
X954 Three Greek crosses from one: A question posed in AM, page 168
X955 Easy arithmetic: ab...z x 4 = b...za x 5
X956 Card frames: a+b+c=c+d+e+f=f+g+h=h+i+j+a=22, {a,...,j}={1,...,10}
X957 Pocket money: *
S949, S950, S951
S952 (see also below, following S971)
S953


+77(29)602
X958 A chess puzzle: (by Loyd)
X959 A charade:
X960 News boys: *
X961 Correcting a blunder: Triangle with integer sides, height, and bisector
X962 The longest palindrome: Longer than REVIVER?
S954, S955, S956, S957


+78(29)91
X963 Stars and crosses: Cut 6x6 into four cong parts, each containing a
 star and a cross [cf X871]
X964 Digital squares: abc^2 = defghi, {a,...,i}={1,...,9}
X965 A rebus:
X966 Antigrams: LEPER - REPEL; what's the longest?
X967 A juvenile puzzle: Hopscotch board with one continuous stroke (Eulerian)
S958 (see also below, following S971)
S959, S960, S961
S962 RELEVELER (see also below, following S976)
S947


+78(29)208
X968 The zigzag puzzle: [Reprise of X30]
X969 City luncheons: *
X970 Measuring the river: *
X971 Easy draughts:
S963, S964, S965
S966 (see also below, following S976)
S967


+78(29)312
X972 Shifting cards: [Reprise of X27]
X973 Buying ribbon: *
X974 Arithmetical progressions: abc,def,ghi; acb,dfe,gih, {a,...,i}={1,...,9}
X975 Geographical excisions: Word play, TRAVESTY - VEST = TRAY
X976 A new boomerang puzzle: Find abc from (abc mod 11, bca mod 11, cba mod 11)
S968, S969, S970, S971, S952, S958


+78(29)391
X977 A chess puzzle: (by Horwitz)
X978 Broken cities: Eleven city names, fragmented
X979 Square and cube: abcd = x^2, efghij = x^3, {a,...,j}={0,...,9}
X980 Domino multiplication: Put 28 of them into seven dominetics
S972, S973
S974 (see also below, following S985)
S975, S976, S962, S966


+78(29)520
X981 A draughts ending: 3 kings versus 2
X982 Trading in oranges: *
X983 Consonants and vowels: Longest word with one vowel
X984 A complete skeleton: Skeletons for two related divisions
X985 Lawn tennis: 8 couples on 4 courts in 7 days, never with spouse
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S977, S978, S980, S979

+78(29)661-663 Christmas Puzzle Chatter
Z29.1 A strange coincidence: Identify a lady who is almost like George Eliot
Z29.2 Horatio's clock puzzle: [Reprise of Z14.6]
Z29.3 Mind your P's and Q's: Identify 5-letter words [PQ].... from definitions
Z29.4 A letter square: Spell animal names as king paths
Z29.5 The four ships: Make them equidistant [similar to Z16.4, with twist]
Z29.6 A little arithmetical puzzle: Multiplication reverses the digits
S981, S982
S983 STRENGTHS
S984, S985
S974 "...large number of...easy solutions...now hardly worth correction."

+79(30)102-103
X986 Counting the matches: *
X987 Brick bond: Draw as much as possible in one continuous stroke
X988 Consecutive numbers: Identify them from the pattern of their prime factors
X989 The siege of Troy: A cute mate in 4
SZ29.1, SZ29.2, SZ29.3, SZ29.4, SZ29.5
SZ29.6 (see also below, following S993)

+79(30)198
X990 Square and triangle: Fold a square to make an equilateral triangle
X991 Holiday problem: *
X992 Vowels and consonants: Longest alternating word like GENERAL
X993 Pocket money: *
S986, S988
S987 (see also below, following S1001)
S989

+79(30)312
X994 The numbered frame: $(a+...+f=(f+..+k)/2=(k+...+p)/3+(p+...+t+a)/4$,
 $\{a,...,p\}=\{1,...,20\}$, with fewest exchanges
X995 Ring of animals: ELK - KANGAROO - OTTER - RAT etc
X996 Square root skeleton:
X997 Shifting the pieces: Without pawns, rotate init pos 90 deg in fewest moves
S990, S991, S992, S993, SZ29.6

+79(30)404
X998 Easy draughts:
X999 Digital divisors: Min and max abcdefghi, $\{1,...,9\}$, divisible by 1,2,...,9
X1000 Choosing a site: What point inside equilateral triang is closest to sides
X1001 The engine-driver's name: Logic puzzle
S994, S995, S996, S997

+79(30)520
X1002 A teasing chess puzzle: [Reprise of Shinkman's X184]
X1003 Permuted digits: *
X1004 A charade:
X1005 Painting a tetrahedron: With two colors in all ways
 [He explains a nice way to make paper tetrahedron from an envelope]
S998, S999
S1000 [Was his joke for number 1000]
S1001
S987 He says he can increase the length to 304, possibly more

+79(30)640
X1006 The encircled triangles: Draw with few continuous strokes
X1007 A railway carriage number: abcda divisible by d and by the prime bcd
 [and also by 64, but that fact isn't necessary since 10001 = 73x137]
X1008 Ring of birds: A sequel to X995
X1009 Dividing by nine: Trick
S1002, S1003, S1004, S1005

+80(30)112
[Beginning with this issue, published in July 1930, the Perplexities
page no longer carried a byline; Henry E. Dudeney, who was specifically
credited with all columns from May 1910 until June 1930, had died on
24 April 1930. The column continued to appear monthly until The Strand
Magazine ceased publication in the 1950s; but, perhaps appropriately,
Dudeney's own final Perplexity had the prime number 1009 = MIX.]
S1006, S1007, S1008, S1009

In the cross-references, P stands for problems in The Weekly Dispatch,
T for problems in Tit-Bits, CP for Canterbury Puzzles, AM for Amusements
in Mathematics, MP for Modern Puzzles, PCP for Puzzles and Curious Problems,
LC for Loyd's Cyclopedia, and WP for Dudeney's 300 Best Word Puzzles
[in Martin Gardner's edition of 1968].

X1 = P535, AM224
X2 = WP241
X3 = P334, AM12
X4 = AM383 is equivalent to AM277
X5 is a simpler version of AM309
X7 = P287, AM274
X9 = AM80
X10 = P347 is similar to (but less elegant than) AM215
X11 = PCP257
X12 = WP144
X13 = AM279 is simplified version of P444

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X15 = P403, AM31
X16 = P508, AM139
X17 = P351, AM249
X18 = P288, AM146
X19 = P390, AM237, PCP252
X20 is a simplification of AM253
X21 = P349, AM93
X22 = AM56, PCP39
X23 = AM267
X28 = P229, P496, AM209
X29 = AM171
X33 = AM389
X34 = AM362
X36 = AM329
X37 = P172, AM275
X39 = AM265
X40 = P262, AM341
X41 is almost identical to Z09.19
X42 = AM360
X43 = P193, AM223
X45 = AM150
X46 = AM23
X47 = AM252
X48 = AM95
X49 = AM317 is a simplification of P324
X50 = AM21
X51 = AM326
X52 = PCP193
X53 = AM366
X54 = AM204
X55 = AM266
X56 = P434, AM217
X57 = P475
X58 = PCP196
X60 = AM384
X62 = AM323 is similar to P161
X64 = AM43
X65 = AM202
X66 = P478
X68 = PCP232
X69 is equivalent to AM220
X70 = AM1
X72 is similar to MP10
X73 = AM248
X75 = AM13
X78 = AM380
X79 = AM178
X82 = AM225
X83 = AM115
X84 = AM356
X85 = AM306
X86 = WP170
X87 = AM268
X88 = AM234
X89 = AM101
X90 = P531, AM63
X91 = AM247
X92 = AM219 = WP294 is a simplification of P12
X93 = AM421
X94 = PCP250
X95 = P458, AM25
X96 = AM167
X97 = PCP260
X98 = AM203, MP211
X99 = AM126
X100 = AM334
X101 = AM147
X102 = AM240
X103 = AM260
X104 = AM24
X105 = AM415
X106 = AM339
X107 = AM235
X108 = P486, AM180
X109 = AM153
X110 = AM396
X111 = PC1(1896.12.13), AM211
X112 = P139, PCP338
X113 = P1
X114 = P19 is (in part) mentioned in WP page 51
X115 = P11, WP192
X116 = P219, AM77
X117 = AM111
X118 = AM205
X119 = P191, AM26
X120 = P31, WP74
X121 = P34
X122 = P3, WP138
X123 = P175, PCP303
X124 = AM175
X125 = WP29
X126 = WP75
X127 = P200, PCP259
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X129 = AM127
X131 = AM165
X132 = WP297
X133 = P86, WP86
X134 = P384, AM226
X135 = P454, PCP282
X136 = AM102
X137 = PCP359
X138 = P415, AM183
X139 = WP123
X140 = AM332, MP151
X141 = AM365
X142 = AM347
X143 = AM114
X144 = P106, WP139
X145 = AM125
X146 = AM251, MP156
X147 = AM239 is the first part of MP157
X148 = WP31
X149 = AM140
X150 = AM208
X151 = AM54
X152 = AM406
X153 = P122, AM6
X154 = P82, WP128
X155 = AM214
X156 = AM391
X157 = AM241
X158 = AM11
X159 = MP21
X160 = AM372
X161 = AM103
X163 = AM151
X164 = AM333
X165 = AM42
X167 = AM216
X168 is a simplification of P381, AM158
X169 = AM285
X170 = AM23
X171 = P8, AM230
X172 = P39, AM45
X173 = P9,WP174
X174 = P89, WP224
X176 = PCP353
X177 = P51, WP187
X178 = AM278
X179 = AM179
X180 = PCP319
X181 = AM15, MP4
X182 = P29, WP136
X183 = AM429
X186 = WP30
X187 = AM327
X188 = P446, AM422
X189 = AM89
X190 = WP147
X191 = P527, AM138
X192 = AM414
X193 = AM416, MP219
X194 = AM386
X195 = MP195
X196 = P101, PCP166
X197 = AM228
X198 = P121, WP90
X200 = PCP277
X201 = MP162
X202 = MP149
X203 = WP176
X204 = WP267
X205 = AM405
X206 = MP99
X207 = MP103
X208 = AM69
X209 = WP175
X210 = P423, AM244 is similar to PCP209
X211 = P466
X212 = PCP318
X213 = AM104
X214 = WP196
X215 = PCP270
X216 = AM74
X218 = MP1
X219 = WP221
X220 = P318, AM343
X222 = PCP271
X223 = P302, MP38
X224 = WP98
X225 = PCP360
X226 = PCP347
X227 = WP296
X228 = WP99
X230 = LC286, PCP142
X232 = P247, AM118
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X234 = PCP326
X235 = WP271
X237 = PCP153
X238 = MP118
X239 = MP87
X240 = PCP67
X242 = PCP154
X243 = MP147
X244 = PCP66
X246 = PC4(1903.12.20), MP114
X247 = P457, MP92
X248 = MP154
X249 = WP18
X251 = PCP251(!)
X252 = PCP306
X254 = WP133
X256 = MP206
X257 = PCP220
X258 = WP212
X259 = WP204
X261 = MP177
X264 = PCP344
X265 is similar to P283, PCP283
X266 = P276, AM94
X267 = MP146
X269 = AM272, PCP287
X272 = MP69
X273 = WP84
X274 = AM385
X276 = MP116
X277 = WP214
X279 = MP178
X280 = WP188
X281 = WP63
X283 = T49, AM218
X284 = AM322
X285 = MP169
X286 = WP62
X287 = WP94
X288 = AM66
X289 = WP10
X292 = WP295
X293 = MP165
X294 = WP230
X295 = AM76
X296 = AM58
X297 = WP151
X298 = MP152
X299 = WP239
X300 = MP215
X301 = WP157
X303 = WP299
X304 = AM98
X305 = MP207
X307 = MP203
X309 = MP186
X311 = P93
X314 = WP141
X316 = P33
X317 = WP241
X319 = P484
X320 = P233
X321 = P35, WP125
X323 = AM73
X325 = WP27
X326 = PCP285
X327 = WP203
X328 = MP179
X330 = MP163
X331 = PCP218
X333 = P460, AM157
X335 = PCP58
X336 = WP287, an extension of P245
X337 = MP220
X338 = MP91
X339 = MP124
X340 = MP43
X341 = WP278
X342 = P404, AM246
X343 = MP222
X346 = PCP76
X347 = PCP169
X350 = P98, WP81
X351 = MP199
X352 = P522
X353 = PCP308
X354 = PCP34
X357 = P215
X358 = MP137
X359 = MP84
X360 = WP143
X361 = P325, AM342
X363 = P291, AM148
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X364 = MP79
X365 = WP229
X366 = WP244
X369 = WP242
X371 = WP263
X372 = MP164
X373 = WP166
X374 = WP78
X375 = PCP281
X376 = MP22
X377 = WP131
X379 = WP14
X381 = MP25
X383 = PCP20
X384 = WP73
X386 = MP35
X387 = WP257
X388 = Z96.1
X389 = AM397, MP205
X390 = WP124
X391 = WP171
X393 = AM86, PCP108
X394 = P110, WP127
X396 = PCP192
X397 = PCP228
X398 = PCP47
X399 = WP165
X400 = MP141
X401 = MP16
X402 = WP253
X403 = P102, WP82
X405 = MP208
X406 = MP198
X407 = MP36
X408 = WP213
X409 = MP135
X410 = WP142
X411 = WP76
X413 = PCP331
X414 = P170
X416 = P42, WP71
X417 = WP12
X418 is somewhat similar to P293, CP42, and uses the same illustration
X419 = WP234
X420 = P299
X421 = WP288
X422 = MP142
X423 = WP185
X424 = P25, PCP170
X426 = P160, PCP145
X427 = P466
X428 = PCP112
X429 = PCP191
X430 = WP page 2
X432 = WP145
X433 = PCP165
X434 = WP285
X436 = P43, WP189
X437 = MP136
X438 = MP60
X441 = P38, WP137
X442 = PCP324
X444 = MP128
X445 = WP89
X446 = WP227
X449 = WP page 5
X452 = MP34
X453 = MP175
X454 = MP54
X455 = PCP280
X456 = PCP164
X458 = WP180
X459 = WP233
X460 = MP138
X461 = WP205
X462 = PCP313
X464 = MP45
X465 = WP182
X466 = MP53
X467 = PCP213
X469 = MP139
X471 = MP119
X472 = WP page 1
X474 = MP58
X475 = WP292
X476 = MP56
X477 = MP125
X478 = WP195
X481 = PCP16
X482 = MP217
X483 = WP100
X484 = PCP23
X485 = PCP179
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X486 = MP6
X487 = P541, PCP188
X488 = WP156 = WP284
X489 = WP201
X490 = MP214
X491 = PCP80
X492 = PCP305
X494 = WP200
X497 = PCP356
X498 = WP209
X500 = MP20
X501 = P391
X502 = WP261
X503 = PCP26
X505 = PCP355
X506 = WP97
X508 = PCP173
X509 = WP259
X510 = WP167
X511 = WP279
X512 = P385, PCP187
X514 = WP276
X515 = PCP255
X516 = MP80
X517 = WP190
X518 = MP180
X519 = WP262
X520 = T38, MP204
X522 = MP55
X523 = MP111
X524 = WP1
X525 = MP31
X527 = WP16
X528 = PCP190
X529 = MP86
X530 = MP181
X532 = WP211
X533 = P1
X534 = WP4
X536 = MP65
X537 = PCP213
X539 = WP282
X540 = MP145
X542 = MP132
X543 = WP page 3
X544 = PCP87
X545 = AM359, MP150
X546 = WP2
X547 = WP286
X549 = PCP73
X550 = MP117
X551 = WP277
X552 = P191, PCP37
X553 = WP5
X554 = MP121
X558 = PCP266 (and it is similar to P471)
X559 = MP201
X560 = WP255 [see Hoffmann's 5.1]
X561 = MP82
X562 = WP150
X563 = MP209
X564 = WP123
X565 = MP8
X566 = MP98
X567 = MP109
X568 = MP72
X569 = MP130
X570 = WP235
X571 = PCP27
X572 = WP page 4
X573 = MP63
X576 = MP39
X577 = MP24
X578 = WP77
X579 = MP122
X580 = MP50
X581 = MP29
X582 = MP221
X583 = WP254
X585 = MP26
X586 = WP283
X587 = MP188
X588 = MP148
X589 = MP83
X591 = WP3
X592 = MP51
X594 = PCP141
X595 = MP52
X596 = P119, WP72
X598 = WP186
X600 = WP216
X601 = PCP135
X602 = MP155
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X604 = WP23
X605 = PCP237
X606 = PCP107
X607 is similar to PCP97
X608 = PCP222
X609 = WP206
X610 = WP87
X612 = MP19
X614 = WP15
X615 = PCP207
X616 = P63, WP129
X618 = PCP230
X619 = WP93
X620 = T5, WP293
X621 = WP207
X626 is equivalent to PCP211
X627 = MP70
X628 = WP22
X630 = WP266
X631 = PCP210
X632 = AM368, PCP294
X633 = WP152
X634 = MP94
X635 = PCP337
X636 = PCP4
X637 = PCP289
X639 = WP194
X640 = MP104
X641 = MP71
X642 = P135, WP135
X643 = MP46
X644 = WP240
X645 = PCP312
X646 = MP61
X647 = WP208
X648 = MP42
X649 = P123, MP126
X652 = MP131
X653 is similar to PCP97
X654 = MP183
X655 = WP215
X656 = PCP336
X657 = WP168
X658 = PCP209
X659 = WP13
X660 = MP96
X662 = PCP95
X664 = MP47
X665 = MP158
X666 = WP210
X667 = MP134
X668 = MP73
X669 = WP8
X670 = MP194
X671 = MP191
X672 = WP9
X674 = WP95
X676 = PCP2
X677 = PCP208
X678 = WP91
X682 = MP97
X683 = WP96
X684 = MP67
X686 = WP148 and WP page 48
X687 = P91, WP184
X688 = MP57
X689 = PCP206
X690 = MP3
X692 = MP68
X693 = P95, WP134
X694 = MP167
X695 = WP19
X696 = PCP40
X699 = MP62
X700 = MP7
X701 = WP70
X704 = PCP140
X705 = WP197
X706 = WP24 and WP25
X707 = MP184
X709 = PCP307
X710 = MP105
X711 = WP92
X713 = WP236
X714 = MP90
X715 = T38, MP204
X716 = PCP106
X718 = WP79
X719 = WP268
X722 = MP40
X723 = WP280
X724 = PCP163
X725 = MP153
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X726 = MP185
X728 is similar to P55
X730 = WP237
X731 = MP173
X732 = P78, WP83
X733 = MP174
X735 = PCP186
X736 = MP197 is similar to P192
X737 = WP281
X738 = WP248
X739 = MP64
X740 = WP177
X741 = MP11
X742 = WP80
X743 = WP250
X744 = MP49
X745 = WP228
X746 = PCP284
X747 = WP85
X748 = WP252
X749 = PCP227
X750 = WP17
X751 = WP198
X753 = WP251
X754 = PCP72
X756 = PCP339
X757 = WP249
X758 = MP23
X759 = PCP204
X760 = MP59
X764 = MP33
X765 = WP183
X766 = PCP149
X767 = WP284
X773 = MP190
X774 = MP66
X776 = P268, AM423
X777 = MP196
X778 = MP95
X779 = PCP171
X780 = PCP111
X783 = PCP42
X793 = PCP180
X794 = PCP309
X798 = MP74
X802 = PCP15
X804 = PCP314
X805 = LC244, PCP137
X806 = PCP86
X808 = PCP14
X809 is similar to PCP215
X810 = PCP65
X812 = PCP124
X819 = PCP351
X820 = PCP229
X822 = LC288, PCP185
X824 = PCP83
X825 = PCP30
X826 = PCP110
X828 = PCP318
X830 = PCP246
X834 = PCP77
X836 is related to P201
X839 is related to P253
X840 = P286, PCP147
X841 = PCP184
X844 = PCP183
X845 = PCP162
X846 = PCP55
X852 = PCP167
X853 = PCP56
X857 = PCP125
X858 = PCP182
X859 = PCP74
X861 = PCP161
X862 = PCP51
X865 = PCP119
X867 = PCP224
X870 = PCP120
X872 = PCP340
X874 = PCP105
X876 = PCP292
X877 = PCP99
X878 = PCP160
X885 = PCP310
X887 = PCP54
X890 = PCP262
X892 = PCP203
X895 = P145
X899 = PCP159
X903 = PCP202
X906 = PCP89
X908 = PCP346
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X909 = PCP25
X910 = PCP276
X911 = PCP296
X913 = PCP90
X915 = PCP104
X918 = PCP91
X919 = PCP261
X921 = PCP53
X924 = PCP103
X925 = PCP290
X927 = PCP345
X929 = PCP129
X931 = MP197
X933 = PCP62
X938 = PCP35
X940 = PCP64
X941 = PCP275
X945 = PCP175
X947 = PCP274
X948 = PCP102
X950 = PCP36
X951 = PCP101
X954 = PCP181
X955 = PCP116
X956 is similar to AM381
X959 = WP107
X960 = PCP158
X961 = PCP242
X963 = PCP178 is almost the same as AM289
X964 = PCP100
X967 = PCP333
X969 = PCP273
X970 = PCP200
X973 = PCP50
X980 = PCP311
X984 = PCP113
X986 = PCP157
X990 = PCP201
X1000 = PCP328
X1001 = PCP49
X1005 is a simplification (to two colors) of P448, AM281
X1006 = P368, PCP330


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Z08.1 = AM350
Z08.2 = AM316 is a simplification of P309
Z08.3 = AM313
Z08.4 = AM357
Z08.7 = P244, AM319
Z08.8 = AM348
Z08.9 = AM355
Z08.10 = AM353
Z08.X = P222, AM346
Z08.13 = PCP304
Z08.15 = MP193 is similar to P316, AM406
Z08.16 = T38, MP204
Z08.17 = P312, AM227
Z08.18 = P521, AM304
Z08.19 = P459
Z08.20 = AM193, PCP241
Z08.21 = AM192 [it had previously appeared in The Captain, Jan 1900]
Z08.23 = P432, AM199
Z08.24 = AM110
Z08.27 = P396, AM417
Z08.31 = T54, AM315
Z08.32 = AM310
Z08.34 is similar to P188, PCP189
Z08.36 = P108, AM236
Z08.39 = P209, AM424
Z08.41 = P179 and P388; part of it appears in AMp56
Z08.43 = AM421, is similar to T25
Z08.44 = P501, CP75
Z08.45 = P440
Z08.46 = AM232
Z09.1 = AM419
Z09.3,Z09.4,Z09.5 = AM28
Z09.7 = AM284 = PCP247 is related to P243, CP4
Z09.8 = PCP247
Z09.9 = PCP293
Z09.10 = P4, CP67
Z09.11 = CP27, similar to P72, AM358
Z09.12,Z09.13,Z09.14 = P328, AM233
Z09.15 = P246, AM210
Z09.17 = AM231
Z09.18 = P259, AM221
Z09.19 is a greatly simplified version of P192
Z09.21 is similar to P412, see AM page 151
Z09.22 = P142, AM27
Z09.23 = P195, AM29
Z09.24 = AM30 (first part)
Z12.1 = AM52
Z12.2 = AM123
Z12.4 = AM363
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Z12.5 = PCP6
Z12.7 = AM229
Z12.8 = PCP301
Z12.9 = AM392
Z13.1 = WP291
Z13.2 = AM75
Z13.2+ = WP269
Z13.3 = AM198
Z13.5 = AM168
Z13.7 = AM99
Z13.8 = AM72
Z13.9 = AM294
Z13.10 = PC5(1903.12.20), AM109
Z14.1 = MP85
Z14.2 = P339, AM143
Z14.3 = PCP24
Z14.4 = MP151
Z14.5 = P306
Z15.1 = P268, AM423
Z15.8 = P271
Z15.9 = Weekly Dispatch puzzle M1 of 1903.04.19
Z16.4 is simplification of T34
Z16.6 = MP127
Z16.7 = PCP217
Z16.9 = WP298
Z16.11 is similar to PCP359
Z16.12 = WP153
Z16.13 = WP154
Z16.15 = P534, WP53
Z16.16 = WP231
Z16.17 = WP290
Z16.18 = WP273
Z17.1 = WP116
Z17.5 = WP20 = WP114
Z17.6 = MP144
Z17.9 = MP78
Z17.10 = MP192
Z17.12 = WP289
Z17.13 = PCP300
Z17.14 is a simplification of AM299
Z18.1 = WP264
Z18.2 = MP44
Z18.3 = WP191
Z18.4+ = WP169
Z18.5 = PCP121
Z18.6 = PCP254
Z18.9 = T36, MP89
Z18.10 = WP27
Z18.11 = MP187
Z19.1 = WP69
Z19.3 = PCP43
Z19.4 = PCP199
Z19.5 is a simplification of T54
Z19.7 = PCP219
Z20.4 = MP32
Z20.6 = MP189
Z20.7 = WP155
Z20.8 = WP226
Z20.10 = MP218
Z21.1 = PCP12
Z21.2 = WP217 and WP26
Z21.4 = MP48
Z21.5 = MP106
Z21.6 = AM119
Z21.8 = P503, WP55
Z21.10 = MP129
Z22.5 = WP88
Z22.6 = MP143
Z23.1 = PCP9
Z23.2 = P184, MP30
Z23.3 = PCP21
Z23.5 = WP6
Z23.6 = PCP195
Z23.9 = MP102
Z24.2 = MP41
Z24.3 = WP172
Z24.4 = MP170
Z24.5 = MP133
Z24.7 = P23, WP199
Z24.10 = P47, WP130
Z24.11 = MP168
Z25.1 = MP101
Z25.2 = PCP364
Z25.5 = PCP240
Z25.7 = WP238
Z25.8 = PCP71
Z25.9 = WP24
Z25.10 = MP107
Z25.11 = WP page 26
Z25.12 = MP212
Z26.1 = PCP131
Z26.2 = PCP350 and is similar to P438
Z26.3 = PCP93
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Z26.4 = PCP348
Z26.6 = PCP127
Z26.11 = PCP223
Z26.12 = AM145 [it had previously appeared in Cassell's Magazine, Dec 1909]
Z27.1 is partly P57
Z27.5+ = WP274
Z27.8 = PCP359
Z27.13 is a slight extension of P195 = AM29
Z28.8 = PCP334
Z29.5 = T34
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