



Ford Rallye Sport Club

National Indoor Rally Championship

'FINAL RALLY'

TIME ALLOWED = 1 hr. 30 mins.

MAP = Navigational questions are based upon O. S. Map 89, B*. Scale: 1" to one mile.(1971).

FORMAT

- = PART A - The route from start to Petrol Halt.
- PART B - Questions about the route from Start to Petrol Halt.
- PART C - Problem involving recce times calculation.
- PART D - The route from Petrol Halt to Finish asking questions as you plot.
- PART E - Questions based on RAC & FIA regulations.
- PART F - Problem involving special stage pace notes.

MARKING

PART B - each question, or part question, scores points as indicated.	Max score = 90
PART C - Scores 10 marks for a correct answer	= 10
PART D - each question, or part question, scores points as indicated.	Max score = 50
PART E - each question scores 1 point for each exactly correct word/letter given	= 25
PART F - Scores 5 marks for a correct answer	= 5

Overall Maximum Score = 180

TIES At both National and area level, ties (within the top 20 places) will be resolved in favour of the competitor who goes furthest from the start in consecutive question order with the highest number of points, will be the winner. If the tie remains unresolved, a timed "tie decider" which must in any case be taken by the highest scoring driver and navigator at each Final venue, will be employed. If there is still a tie, the younger person, according to the date of birth given when signing on, will be the winner.

RULES TC = Time Control. PC = Passage Control. SH = Spot Height.

- a) No stretch of road, and no junction, may be used more than once.
- b) Except in PART E, neither the GCR's nor the SSR's of the RAC apply to this event.
- c) All places to be visited are given in the correct order unless otherwise stated.
- d) Do not use rights of way unless they are also marked as roads in the normal way.
- e) On odd-numbered sections, take the shortest route using any colour of roads, including whites, even if your local knowledge tells you they are not normally "goers". On even-numbered sections, take the shortest route but treat white roads as if they do not exist.
- f) Where a road disappears momentarily because of lettering on the map, it will be assumed that it still goes through; but roads which are interrupted by buildings drawn across them will be considered blocked.
- g)
 - i) SH's 267 and 470 are out of bounds throughout the rally.
 - ii) SH 372 is out of bounds throughout the rally, except on even numbered sections.
- h) In any questions involving SH's, it is assumed that only SH's marked on the actual rally route are considered.
- i) Gradients of 1 in 7 to 1 in 5 are referred to as "1 in 7" and gradients of 1 in 5 and steeper are referred to as "1 in 5".

THE RALLY

PART A - Route to Petrol Halt

Start of rally - The Inn at Claughton 566666.

Section One (Start to TC1)

Go via 555657 (PC1), 540648 (PC2), 542½640 (PC3), 505611 (PC4) and 498625 (PC5) to TC1 at the red and white crossroads in km. square 5064, approaching from S.

Section Two (TC1 to TC2)

Continue to TC2 at SH 285 in km. square 5269, approaching from S, via these map references, which are not in the correct order: 526687, 539685, 530674, and the junction at 519652. Avoid 538688½, 515685, 510679, 529681, and 510674. Do not go over, under or along M6.

Section Three (TC2 to TC3)

Turn right onto B6254 - SH 332 - SH 124 - turn right immediately before easting 53 - over canal - straight on - right onto yellow road - turn left at the church south of the first "e" in Tewitfield - Priest Hutton - Borwick - down a 1 in 5 gradient - leave Arkholme on B6254 - SH 208 - SH 255 - to TC3 at SH 116 in km. square 5869, approaching from N.

Section Four (TC3 to TC4)

Continue to TC4 at 652749 from S, without going up or down a 1 in 5 or 1 in 7 gradient; without going along A687; and without passing through km. squares 5971 or 6369.

Section Five (TC4 to TC5)

Continue to TC5 at 598789 from SE without passing through any of the following: 614756, 639762, 65157585, 649753, 608735, SH 355 in km. square 6476, 638765, 607793, 602786, 638761.

Section Six (TC5 to TC6)

Without going east of easting 61 or north of northing 85, pass through only four SH's on the way to TC6 at 562807 from E. The numbers which make up the four spot heights are as follows, but not in the same order: 122334455770. TC6 is also the petrol halt.

PART B - Questions about the route from Start to Petrol Halt

1. How many times does the route go under an aerial ropeway between the start and PC4? (2 points)
2. What is the first spot height passed through on Section One? (4 points)
3. How many times does the route go under electricity transmission lines between PC3 and TC1? (2 points)
4. Follow the electricity transmission line at PC4 northwards. What six-figure map reference describes the place where it makes its last appearance on sheet 89? (4)
5. The route for Section One passes within 600 yards of only one triangulation pillar. How many feet is it above sea level? (2)
6. What is the first SH passed through after TC1? (2)
7. How many times does the route for Section Two go up a 1 in 7 gradient? (2)
8. What is the third SH passed through in Section Two? (2)
9. If white roads could be used in Section Two, would the route be shortened: not at all, by about 1.0 mile, by about 0.6 mile, by about 0.2 mile? (2)
10. At TC1 a marshal issues you with an instruction sheet saying that all bridges over the River Lune, upstream of M6, are impassable, but you may divert going under the M6. You start on your diversion, and at 479623½ a marshal issues you with another amendment sheet which says that it is impossible to cross a 50 ft. contour on white, yellow, secondary or trunk roads, until the point where you pass under the M6. You must take the shortest available diversion, and rejoin the original route as early as possible. In what km. square is the most northerly junction on this diversion? (4)
11. If the instructions for Section Two were changed, so that the map references to be avoided had to be visited, and the map references to be visited had to be avoided, would it still be possible to work out a route? (Ignore Question 10). (2)
12. What are the highest and next-highest SH's passed through on Section Two? (Ignore Q.10) (4)

13. Does the first church passed on Section Two have a tower, a spire, or neither? (Ignore Q.10) (2)
14. Ignoring SH's on red and brown roads, what is the highest SH passed through on Section Three? (2)
15. The county boundary between Lancashire and Westmorland runs across km. square 4977. How much of the route in Section Three is in Westmorland: about 5 miles, about 3 miles, about 1 mile, about 0.2 mile, none at all? (4)
16. In which km. square is the westernmost point on a yellow road in Section Three? (4)
17. How many times does the route cross a parish boundary between Arkholme and TC3? (2)
18. If the instructions for Section Four were changed to allow you to go down, but not up, any gradients of 1 in 7 or 1 in 5, in which km. square(s) would you go down these hills, assuming, despite the general shortest-route rule, that you would not leave and rejoin the original route unless you could save at least 0.8 mile? (6)
19. The route for Section Four is partly in Lancashire and partly in Yorkshire. In which km. square do these two counties and Westmorland meet? (2)
20. In which county is TC4? (2)
21. What is the six-figure reference of the westernmost road junction on Section Five before it goes north of northing 78? (2)
22. Assume that a PC has been established at $644\frac{1}{2}756\frac{1}{2}$ on Section Five. How many times does the route go down a 1 in 7 gradient between TC4 and the PC, and how many times between the PC and TC5? (4)
23. What are the first three SH's passed through on Section Five? (6)
24. What are the first and last SH's passed through on Section Six? (4)
25. What is the northernmost SH passed through on Section Six? (2)
26. What is the highest spot height on the route from the start to TC5? (2)
27. How high above sea level is the highest point on the route from the start to the petrol halt? (4)
28. Somewhere in the first six sections, the route uses a red road, then a yellow road and then a brown road, all within 500 yards. What river is crossed just before this? (4)
29. Which section uses red, brown, yellow and white roads? (2)
30. Only two spot heights in the first five sections are on white roads. What are they? (4)

PART C - Recce Time Calculation

31. When you arrive at the Petrol Halt, your team manager requests your advice on some recceing you have already completed. The problem concerns a new tyre regulation introduced at the last minute by the organisers of tomorrow's section of the Rally, which involves special stages within a mountain circuit. Your team manager must urgently telex your tyre supplier to ensure supplies of the correct tyre are available.

The regulation allows you to run either with whatever tyres you wish, in which case a handicap of 10% will be added to the special stage times of each car, or you can nominate one type of tyre to be used throughout the mountain circuit. In the latter case stage times are not altered and there is no limit on the number of tyres you can use, only on the type.

Your recce crews have compiled the weather reports and practice times shown below.

Assuming that the weather conditions remain constant would you run on free tyres or on one fixed type, and if so, which one?

	SS1	SS2	SS3	SS4
DISTANCE	18.3 kms	23.6 kms	24.2 kms	16.8 kms
Road & weather conditions at 11.00 hrs. on 24.1.76.	95% Dry. Ice on a few sheltered bends. Very cloudy.	Approx. 18kms snow, deep on summit. Difficult ascent. Snowing lightly.	6kms snow over summit. Remainder patchy ice. Clear and settled.	8kms snow. Remainder mostly dry with ice patches. Clear and cold.
PRACTICE TIMES USING	Min Sec	Min Sec	Min Sec	Min Sec
A. Racing Tyres	15. 58	32. 16	21. 16	17. 21
B. High speed tyres with 150 studs	16. 46	25. 58	20. 48	16. 43
C. M & S tyres with 250 studs	18. 10	24. 12	20. 32	17. 10
D. M & S tyres with 400 studs	19. 48	23. 40	21. 26	18. 06

PART D - Route, with questions as you plot, from Petrol Halt to Finish

Section Seven (TC6 to TC7)

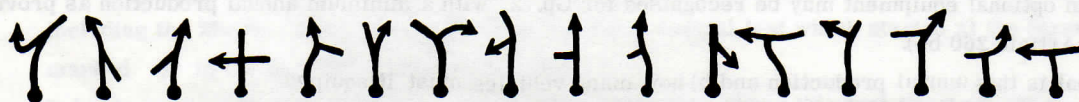


To TC7 @ 553870 from S.

32. How many spot heights are there in Section Seven? (4)
33. Section Seven turns off A65 several times. How many times does it rejoin this road? (4)
34. Assume that a last minute instruction is handed out at TC6, informing you that the route is blocked by snow from the junction where Section Seven first goes onto a white road to the junction where it next turns onto a coloured road. You have to take the shortest route to avoid the blockage and miss as little as possible of the original route; but conditions are so bad that all 1 in 7 gradients must be avoided. What is the highest spot height you would visit on the diversion, in what km. square would the diversion first use a red road, and which of these features would be nearest to the point where you rejoin the original route: telephone call box, milestone, SH or church? (6)
35. If the diagram showing the route for Section Seven had included only coloured roads between 553845 and TC7, how many roads would have been omitted? (2)

Section Eight (TC7 - TC8)

Pass through these junctions as shown on the way to TC8 at 559920 from S. The junctions are not given in the correct order.



36. What is the seventh SH passed through on Section Eight? (4)
37. From what direction is the sixth SH on Section Eight approached? (2)
38. What is the first SH on Section Eight located on a junction? (2)

Section Nine (TC8 - TC9)

TC9 is at 550955 from E. Go down 1 in 7 gradients on a yellow road, go up 1 in 7 gradients on a yellow road, pass more than one milestone, go through km. squares containing a telephone call box - avoid doing any of these things on the way to TC9.

39. After the second junction on Section Nine, the route passes the end of a white road on the right. What is the name of the house along this white road? (2)
40. In which km. square does Section Nine use a yellow road to cross over another road? (4)
41. Section Nine crosses the railway which runs between km. square 6102 and 5392. Between these two squares, the railway has only one siding. In which km. square is it? (4)

Section Ten (TC9 - TC10)

Do not go down a 1 in 7 gradient. 541927 - 538908 - then, without going outside the area bounded by northings 91 and 83, and by eastings 49 and 54, go six times under a multiple track railway on the way to TC10 at 5281872, approaching from W. Do not go over this railway within the box formed by these northings and eastings, or into km. squares 5085 & 5386.

42. What is the first SH passed through on Section Ten? (2)
43. The River Kent runs south from Kendal and through km. square 4985. In which km. square does Section Ten first cross over it? (2)
44. In which km. square does Section Ten come closest to a bridge over a named river, without actually going over it? (4)
45. What are the first two SH's passed through on Section Ten after the point where the route first goes under the multiple track railway? (4)
46. What is the SH before, and what is the SH after, the point where Section Ten goes under the railway for the third time? (4)

PART E - RAC & FIA rules and regulations

Enter the correct missing word(s) on your answer sheet in the right order for each question. One 'x' does not necessarily signify one letter.

RAC Regulations. Organisation. E18 (d).

"A selective section, a regularity test, stage or section on the public highway in which competitors are timed to an accuracy of less than 1 minute (SSR S45). Any such section shall:

47. (i) Not pass a xxxx or xxxxx xxxx which gives warning of an x or x classified xxxx.

48. (ii) Not start before xxxxxxxx and shall be completed by the last competitor by xxx."

Organisation. E20 (1).

49. Where a special stage forms a continuous xxxxxxxx competitors shall not be required to complete more than xxx xxxx.

50. Schedule of Fees (GCR 182) - Protest fees.

a) Where a protest arises from a 'Closed' or 'Restricted' status competition. = £ xxx

b) Nationals. = £ xxx

c) Internationals = £ xxx

51. F.I.A. Appendix 'J'. Title 1. Article 251.

State the minimum number of identical vehicles that must have been produced by a manufacturer to make that vehicle eligible for a) Gp. 1. b) Gp. 2. c) the exact specified time in which those vehicles must have been produced.

52. F.I.A. Appendix 'J'. Article 260 bb).

Certain optional equipment may be recognised for Gp. 2. with a minimum annual production as provided for in Article 260 bb).

a) What is this annual production and b) how many vehicles must it equip?

53. F.I.A. Appendix 'J'. Article 260 cc).

Notwithstanding the above, four specific items, as listed in article 260 cc), may be recognised, without a minimum production, for use in Gp. 2.

Name 2 of them.

54. State, in no more than 4 words in each case, the meaning of the following internationally recognised control symbols.

A) Black on
yellow
background.



B) Black on
yellow
background.



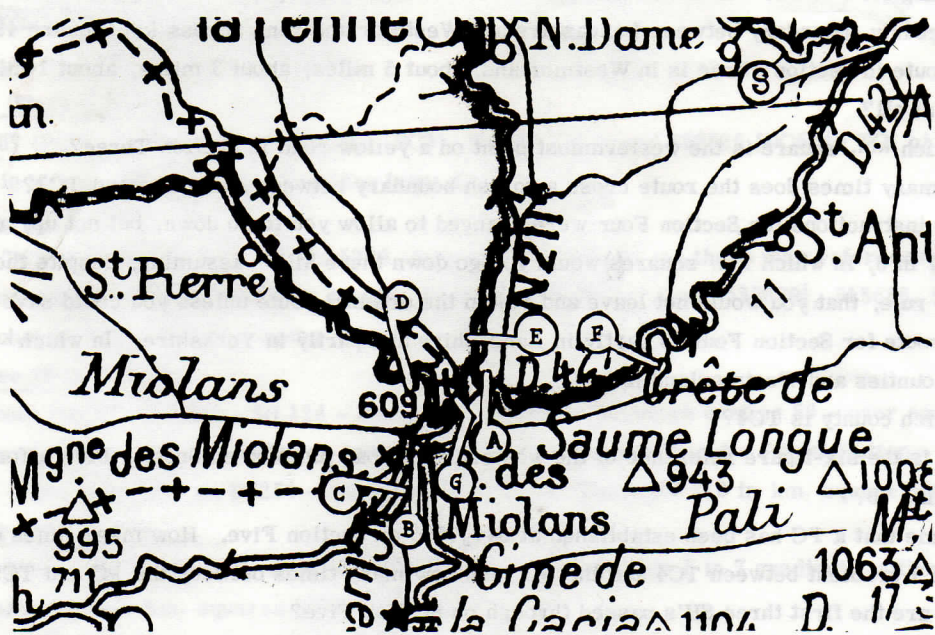
C) Black on
yellow
background.



D) Black on
red
background.



PART F - Special Stage pace notes



55. The map above shows part of the Alpes Maritimes which is used regularly on many French events, including the Monte. The pace notes below are for a special test which started at the junction marked S in the top right corner of the map.

Indicate on your answer sheet the correct letter indicating where this test finished. (Figures are approximate distances in metres).

Note Definitions

F = Flat HP = Hairpin
E = Easy R = Right
M = Medium L = Left
— = 90° - = Into

FR 50 EL 50 FR EL MR Long EL - MR 50 L - R (Village) FL HPL

HPR 100 MR Long L FL - Long R - HPL - R - L - Long R L L 50 Long MR - FL

ER - ML - ER FL ER - FL - R ML L 100 ER 50 L 50 L Finish.

DISTANCE		10.0 km		15.0 km		20.0 km		25.0 km		30.0 km		35.0 km		40.0 km	
Time	Speed	Time	Speed	Time	Speed	Time	Speed	Time	Speed	Time	Speed	Time	Speed	Time	Speed
1.0	10.0	1.1	9.1	1.2	8.3	1.3	7.7	1.4	7.1	1.5	6.7	1.6	6.3	1.7	5.9
2.0	20.0	2.2	18.2	2.4	16.7	2.6	15.4	2.8	14.3	3.0	13.3	3.2	12.5	3.4	11.8
3.0	30.0	3.3	27.3	3.6	25.0	3.9	23.1	4.2	21.4	4.5	20.0	4.8	18.8	5.1	17.6
4.0	40.0	4.4	36.4	4.8	33.3	5.2	30.8	5.6	28.6	6.0	26.7	6.4	25.0	6.8	23.5
5.0	50.0	5.5	45.5	6.0	41.7	6.5	38.5	7.0	35.7	7.5	33.3	8.0	31.3	8.5	29.4
6.0	60.0	6.6	54.6	7.2	50.0	7.8	46.1	8.4	42.9	9.0	40.0	9.6	37.5	10.2	35.3
7.0	70.0	7.7	63.7	8.4	58.3	9.1	54.1	9.8	50.0	10.5	46.7	11.2	43.8	11.9	41.2
8.0	80.0	8.8	72.8	9.6	66.7	10.4	60.0	11.2	56.3	12.0	53.3	12.8	50.0	13.6	47.6
9.0	90.0	9.9	81.9	10.8	75.0	11.6	67.7	12.4	62.5	13.2	59.1	14.0	56.3	14.8	53.4
10.0	100.0	11.0	91.0	12.0	83.3	13.0	76.9	14.0	71.4	15.0	66.7	16.0	62.5	17.0	59.1



USE INSTEAD OF MAP PRINTED ON PAGE 6.