Free-Standing Mathematics Qualification June 2008 Advanced Level



USING & APPLYING DECISION MATHEMATICS 6994/2PM Unit 14

PRELIMINARY MATERIAL

DATA SHEET

To be issued to candidates between Monday 28 April 2008 and Monday 5 May 2008

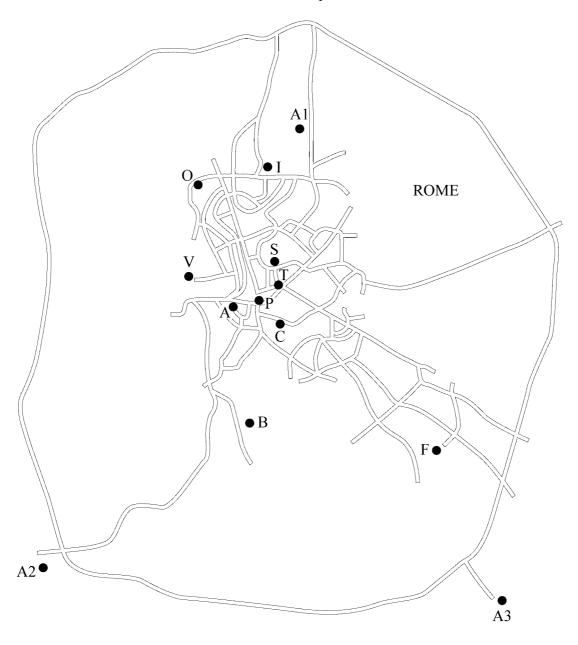
REMINDER TO CANDIDATES

YOU MUST **NOT** BRING THIS DATA SHEET WITH YOU WHEN YOU SIT THE EXAMINATION. A CLEAN COPY WILL BE MADE AVAILABLE.

Rome

The map of Rome shows the locations of some of the main visitor attractions and the city's three airports.

The table shows the distances, in kilometres, between places.



KEY

- A1 Aeroporto dell'Urbe
- A2 Fiumicino Aeroporto
- A3 Ciampino Aeroporto
- A Castel San Angelo
- B Basilica
- C Coliseum
- F Film Studio

- I Ippodroma
- O Olympic Stadium
- P Pantheon
- S Spanish Steps
- T Trevi Fountain
- V Vatican

| | A1 | A2 | A3 | A | В | С | F | I | О | P | S | Т | V |
|----|-----|------|------|-----|------|-----|-----|-----|-----|-----|-----|-----|------|
| A1 | _ | _ | _ | _ | _ | _ | _ | 2.3 | 3.8 | _ | _ | _ | _ |
| A2 | _ | _ | 19.5 | _ | 12.7 | _ | _ | _ | _ | _ | _ | _ | 16.6 |
| A3 | _ | 19.5 | | ١ | 11.8 | ١ | 8.7 | _ | ١ | ١ | ١ | ١ | _ |
| A | _ | _ | | _ | _ | _ | _ | 4.8 | 4.2 | 0.8 | 1.7 | 0.9 | 2.2 |
| В | _ | 12.7 | 11.8 | ı | _ | 3.7 | 4.3 | _ | ı | ı | ı | ı | 4.5 |
| C | _ | _ | l | l | 3.7 | l | 6.8 | _ | l | 2.0 | l | 2.1 | 2.8 |
| F | _ | _ | 8.7 | _ | 4.3 | 6.8 | _ | _ | _ | _ | _ | 7.6 | _ |
| I | 2.3 | _ | | 4.8 | _ | _ | _ | _ | 2.5 | _ | 5.1 | _ | _ |
| О | 3.8 | _ | _ | 4.2 | _ | _ | _ | 2.5 | _ | _ | _ | _ | 4.0 |
| P | _ | _ | _ | 0.8 | _ | 2.0 | _ | _ | _ | _ | _ | 1.2 | 1.9 |
| S | _ | _ | _ | 1.7 | _ | _ | _ | 5.1 | _ | _ | _ | 1.5 | _ |
| Т | _ | _ | _ | 0.9 | _ | 2.1 | 7.6 | _ | _ | 1.2 | 1.5 | _ | _ |
| V | _ | 16.6 | | 2.2 | 4.5 | 2.8 | _ | _ | 4.0 | 1.9 | | | _ |

Turn over

ICT system

A consultancy company has been hired to assess the work involved and the time frame for setting up an ICT system for a new school. The company lists the following activities that are required.

Buy hardware
Buy software
Decide on new computer system
Install cabling for network
Install data
Install hardware
Install software
Prepare ICT control room
Prepare staff/pupil data
Test system
Train ICT support staff
Train teaching staff

Mileage chart

The table shows the distances, in miles, between places in England.

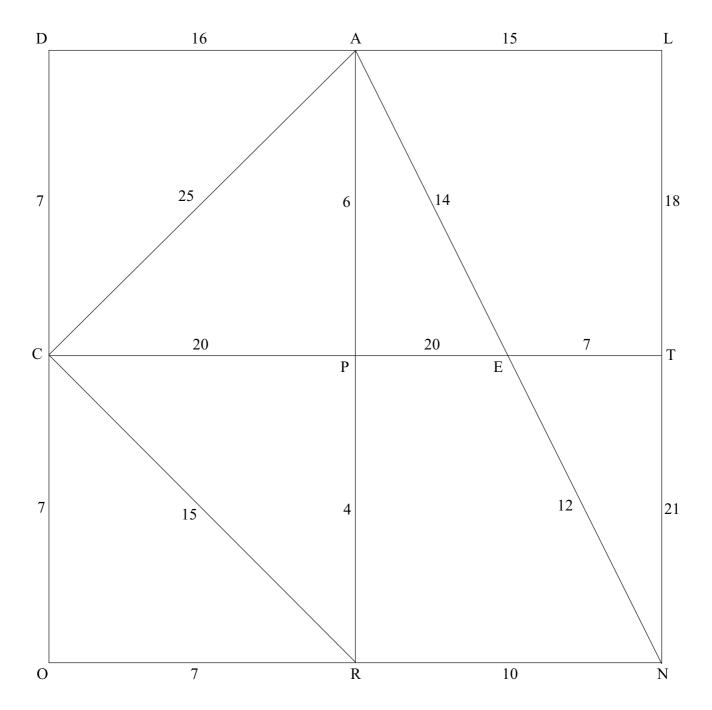
| | Birmingham | Brighton | Leeds | Lincoln | Liverpool | Maidstone | Manchester | Middlesbrough | Newcastle | Northampton | Norwich | Nottingham |
|---------------|------------|----------|-------|---------|-----------|-----------|------------|---------------|-----------|-------------|---------|------------|
| Birmingham | | | | | | | | | | | | |
| Brighton | 171 | | | | | | | | | | | |
| Leeds | 121 | 257 | | | | | | | | | | |
| Lincoln | 89 | 216 | 72 | | | | | | | | | |
| Liverpool | 102 | 277 | 74 | 140 | | | | | | | | |
| Maidstone | 168 | 50 | 233 | 181 | 263 | | | | | | | |
| Manchester | 89 | 264 | 44 | 85 | 35 | 251 | | | | | | |
| Middlesbrough | 177 | 318 | 63 | 123 | 145 | 283 | 115 | | | | | |
| Newcastle | 208 | 349 | 94 | 154 | 176 | 314 | 146 | 38 | | | | |
| Northampton | 55 | 132 | 133 | 92 | 150 | 116 | 137 | 188 | 219 | | | |
| Norwich | 159 | 171 | 173 | 104 | 241 | 135 | 186 | 223 | 254 | 116 | | |
| Nottingham | 54 | 195 | 74 | 38 | 102 | 179 | 71 | 129 | 160 | 66 | 119 | |
| Sheffield | 76 | 233 | 36 | 47 | 79 | 207 | 39 | 100 | 131 | 103 | 147 | 44 |



Road network

The network shows a plan of roads in a town. The number on each edge represents the time taken, in minutes, to travel directly between two places.

Note: the direct route may not be the quickest way to travel between two places.



END OF DATA

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