



Free-Standing Mathematics Qualification
Advanced Level
June 2011

Using and Applying Decision Mathematics

6994/2PM

Unit 14

Preliminary Material

Data Sheet

To be opened and issued to candidates between
Thursday 5 May 2011 and Thursday 12 May 2011

REMINDER TO CANDIDATES

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

Renovating a house

A house has been bought at auction and needs to be completely renovated. Some of the following activities may be required.

- First fix for new electric wiring
- First fix for new plumbing
- Fit new bathroom suite
- Fit new ceilings
- Fit new kitchen
- Fit new plasterboard walls
- Fit new tiles on roof
- Fit new windows
- Install new damp-proof course
- Plaster supporting walls and ceilings
- Remove all wiring
- Remove all plumbing
- Remove bathroom suite
- Remove ceilings
- Remove kitchen units
- Remove plaster from supporting walls
- Remove plasterboard walls
- Remove tiles from the bathroom
- Remove tiles from the kitchen
- Remove tiles from the roof
- Second fix for new electric wiring
- Second fix for new plumbing
- Take out windows
- Tile kitchen
- Tile bathroom

Oil company

An oil company has eleven oil rigs, A, B, ..., K, based in the North Sea and an oil terminal, T, on shore.

The table shows the distances, in miles, between pairs of rigs and the distance of each rig from the terminal.

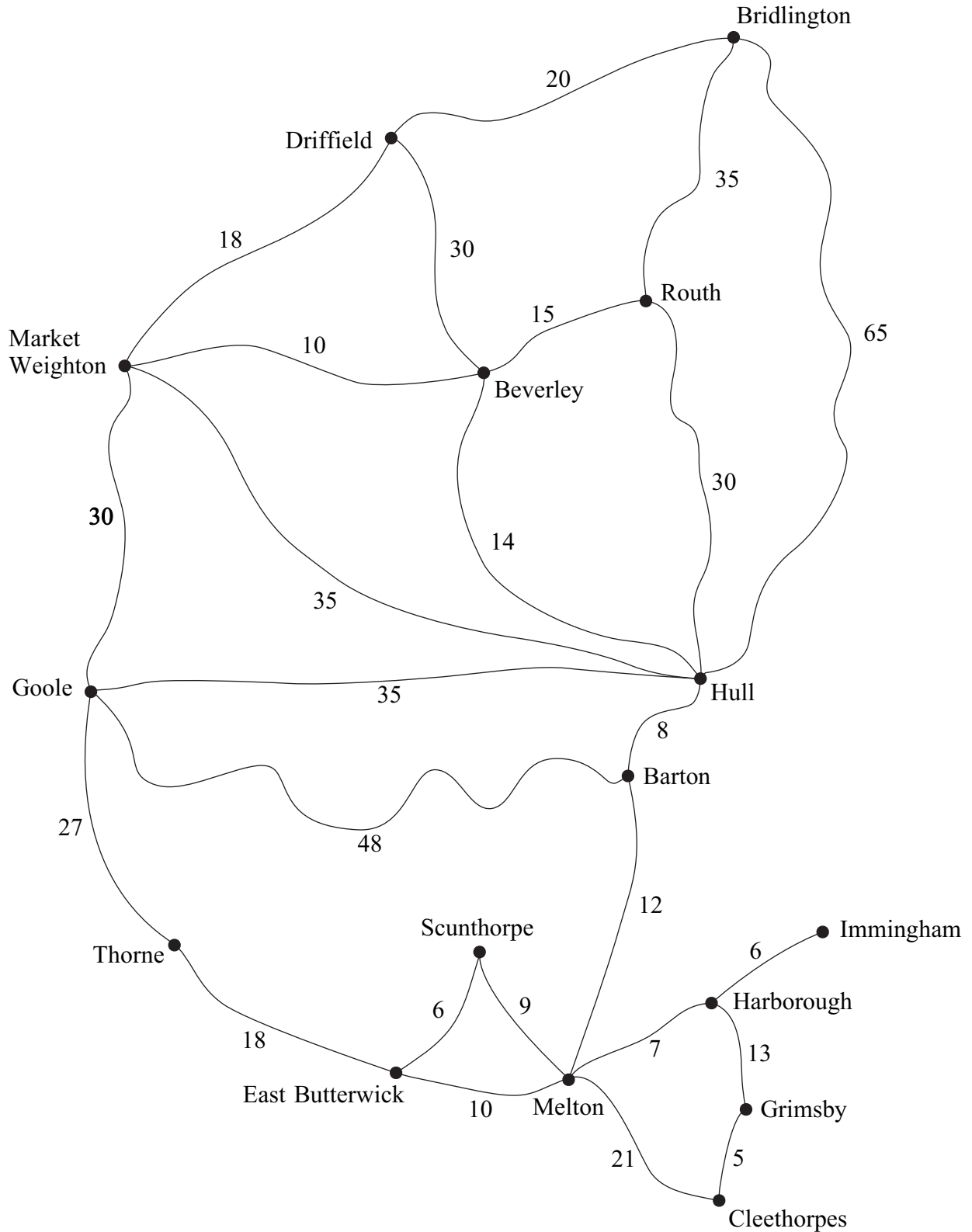
	T	A	B	C	D	E	F	G	H	I	J	K
T	–	70	86	96	90	82	74	80	90	80	90	85
A	70	–	60	40	48	70	44	56	75	60	75	80
B	86	60	–	60	56	60	70	66	60	72	75	82
C	96	40	60	–	44	40	48	56	36	64	82	90
D	90	48	56	44	–	45	48	56	48	66	80	88
E	82	70	60	40	45	–	52	60	56	70	78	92
F	74	44	70	48	48	52	–	56	32	80	82	86
G	80	56	66	56	56	60	56	–	52	68	70	86
H	90	75	60	36	48	56	32	52	–	72	75	90
I	80	60	72	64	66	70	80	68	72	–	68	76
J	90	75	75	82	80	78	82	70	75	68	–	68
K	85	80	82	90	88	92	86	86	90	76	68	–

Turn over

Turn over ►

Humberside

The map shows the locations of some places in Humberside. The number on each edge shows the travelling time, in minutes, between the corresponding pair of towns.



Towns in Sicily

The table shows the time it takes, in minutes, to drive between each pair of towns in Sicily.

	Aragona (A)	Canicatti (C)	Delia (D)	Favara (F)	Grotte (G)	Raffadali (R)	Racalmuto (Rm)	St Elisabetta (Se)	Yoppolo (Y)
Aragona (A)	–	32	26	15	18	23	25	38	22
Canicatti (C)	32	–	20	31	28	38	35	37	32
Delia (D)	26	20	–	26	30	33	29	32	23
Favara (F)	15	31	26	–	32	24	18	28	20
Grotte (G)	18	28	30	32	–	41	39	28	35
Raffadali (R)	23	38	33	24	41	–	27	25	32
Racalmuto (Rm)	25	35	29	18	39	27	–	31	27
St Elisabetta (Se)	38	37	32	28	28	25	31	–	35
Yoppolo (Y)	22	32	23	20	35	32	27	35	–

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