

Paper Reference(s)

6689

Edexcel GCE

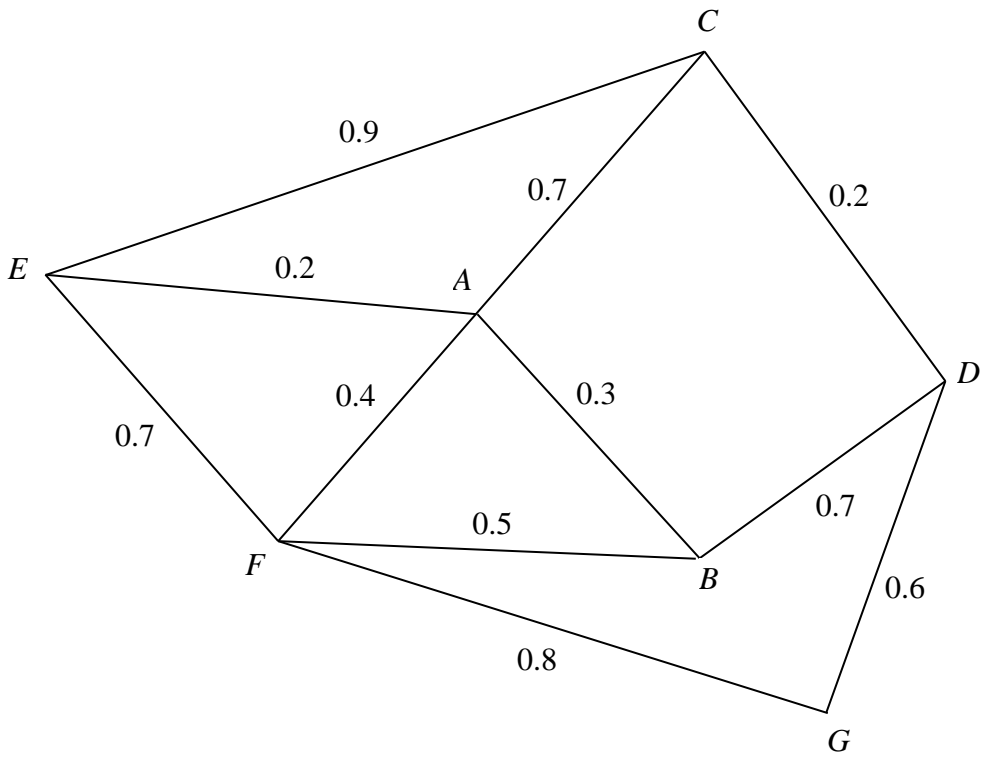
Decision Mathematics D1

Advanced/Advanced Subsidiary

Tuesday 4 November 2003 – Morning

Answer Book

1.



.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

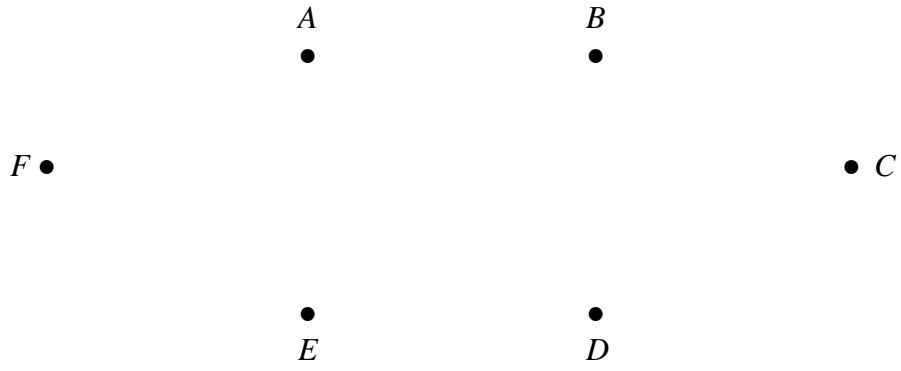
.....

.....

.....

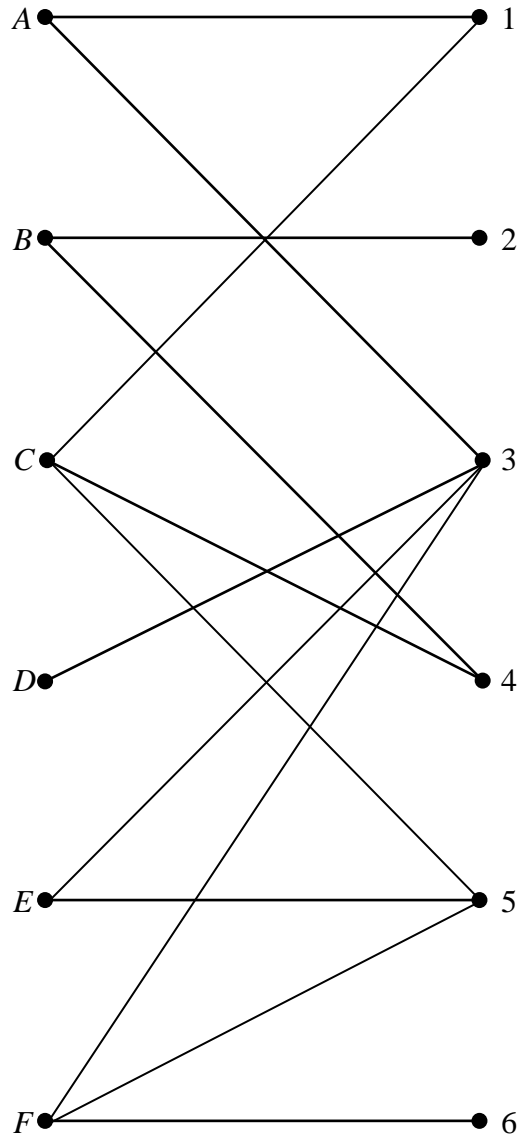
.....

2. (a)



(b)

3.



.....

.....

.....

.....

.....

.....

.....

.....

4. (a)

(b)

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

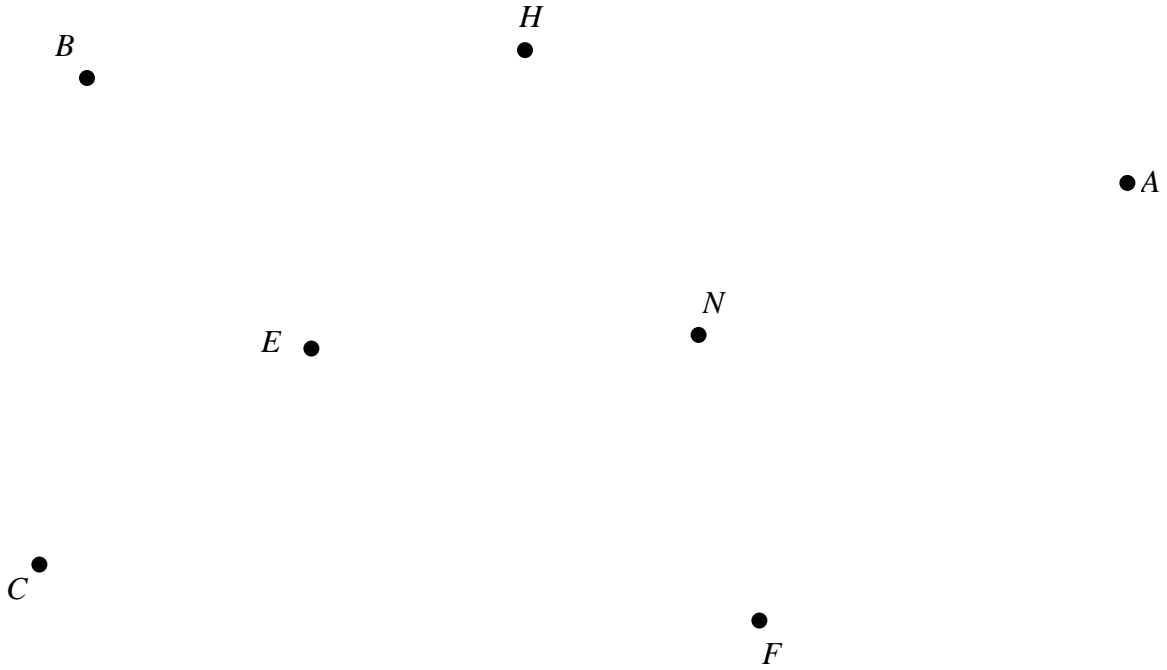
.....

.....

6.
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

(c)

Diagram 1

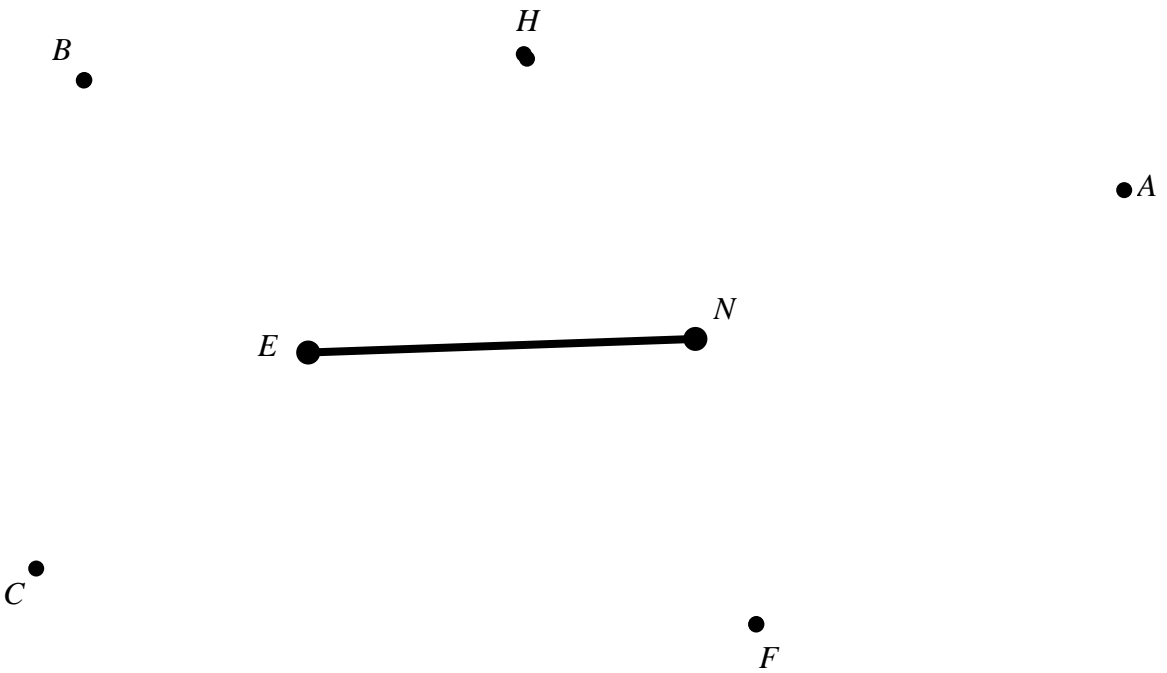


Order arcs included:

Length of minimum spanning tree:.....

(d)

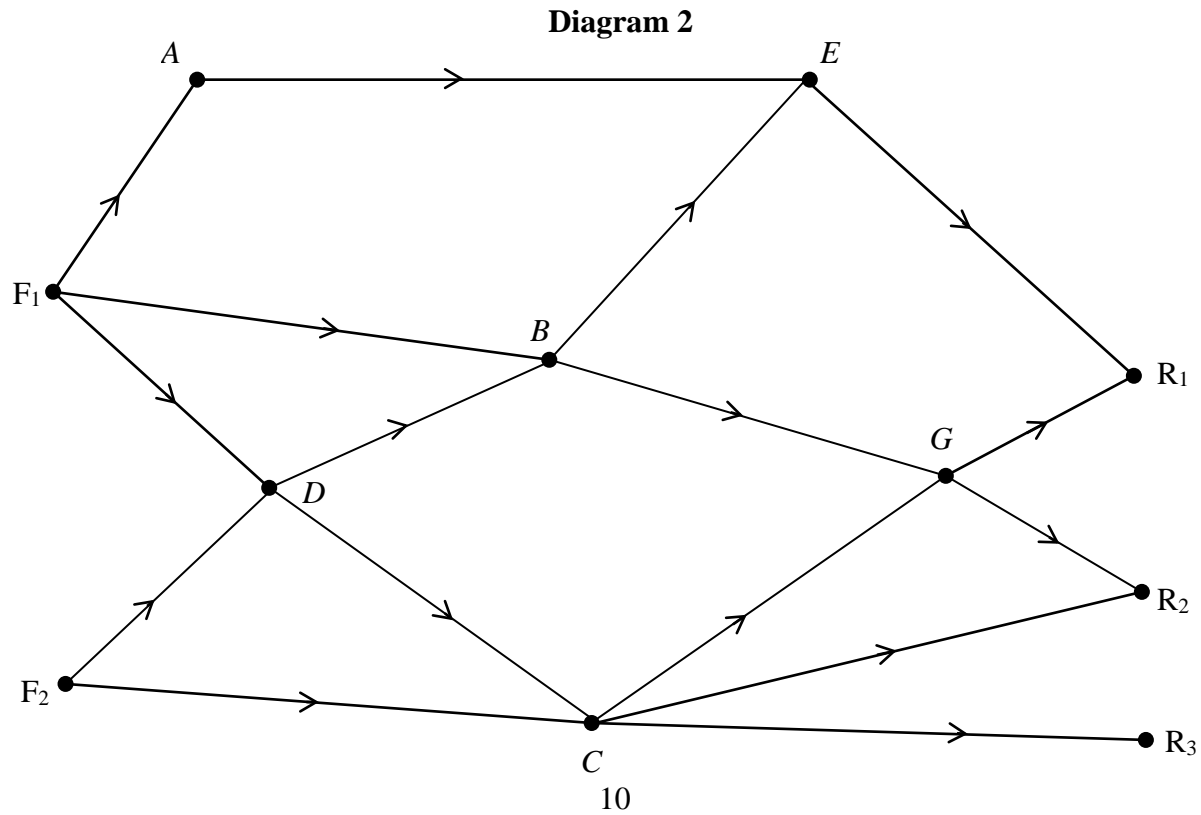
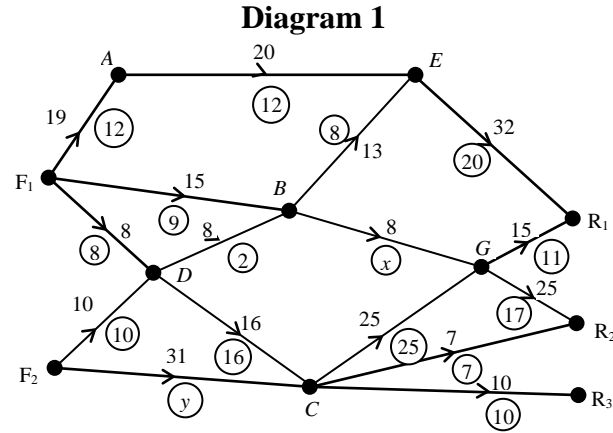
Diagram 2



New cable needed:.....

7. (a) $x = \dots\dots\dots$ $y = \dots\dots\dots$

(b)

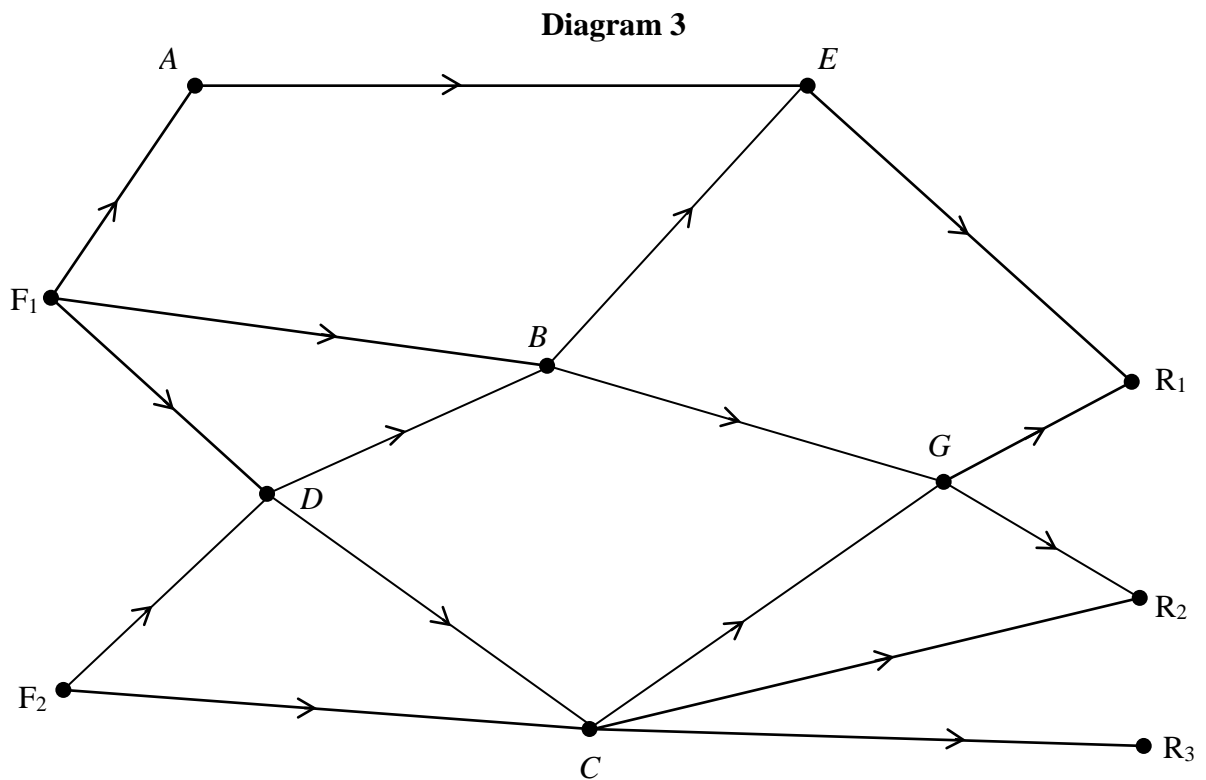


(c)

.....

.....

(d)



Max Flow =

(e)

.....

8.

(c) Profit on small lamp = Euros

Basic variable	x	y	z	r	s	Value
r	3	5	6	1	0	50
s	1	2	4	0	1	24
P	-1	-3	-4	0	0	0

You may not need to use all these tableaux

Basic variable	x	y	z	r	s	Value

Basic variable	x	y	z	r	s	Value

Basic variable	x	y	z	r	s	Value

Basic variable	x	y	z	r	s	Value

Basic variable	x	y	z	r	s	Value

Solution:

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

8. continued

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....



END