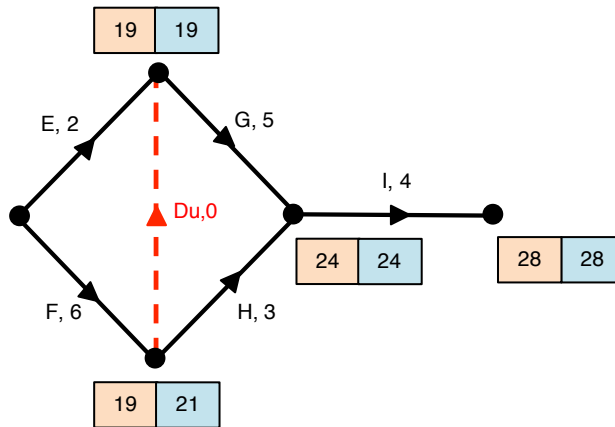


# 2015 Further Mathematics Written examination 2 solutions

## Module 5: Networks and decision mathematics

### Question 3

f.



**Du** is a dummy activity from the end of F to the start of G.

f. ii. Takes 2 minutes longer

## Module 6: Matrices

### Question 1

- a. 120
- b. i.  $q_{12} = 10, q_{23} = 9$
- b. ii. 30
- c. i. CQ
- c. ii.  $15 \times 2 + 25 \times 6 + 40 \times 4 = \$340$

### Question 2

a. They are certain to remain advanced-level students after assessment.

b. i.  $S_1 = \begin{bmatrix} 10 \\ 58 \\ 52 \end{bmatrix}$

b. ii. 12

### Question 3

a. Add an edge starting from *I* and pointing to *L*, labelled 10%. Also, add a loop at *L*, labelled 100%.

b.  $T_2 R_0 = \begin{bmatrix} 6 \\ 50 \\ 43 \\ 21 \end{bmatrix}$

$$\frac{21}{120} \times 100\% = 17.5\%$$