

Wednesday 21 October 2020 – Afternoon

AS Level Further Mathematics A

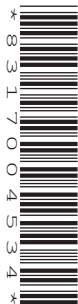
Y534/01 Discrete Mathematics

Printed Answer Booklet

Time allowed: 1 hour 15 minutes

You must have:

- Question Paper Y534/01 (inside this document)
- the Formulae Booklet for AS Level Further Mathematics A
- a scientific or graphical calculator



Please write clearly in black ink. **Do not write in the barcodes.**

Centre number

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Candidate number

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First name(s)

Last name

INSTRUCTIONS

- Use black ink. You can use an HB pencil, but only for graphs and diagrams.
- Write your answer to each question in the space provided in the **Printed Answer Booklet**. If you need extra space use the lined pages at the end of the Printed Answer Booklet. The question numbers must be clearly shown.
- Answer **all** the questions.
- Where appropriate, your answer should be supported with working. Marks might be given for using a correct method, even if your answer is wrong.
- Give non-exact numerical answers correct to 3 significant figures unless a different degree of accuracy is specified in the question.
- The acceleration due to gravity is denoted by $g \text{ m s}^{-2}$. When a numerical value is needed use $g = 9.8$ unless a different value is specified in the question.

INFORMATION

- The total mark for this paper is **60**.
- The marks for each question are shown in brackets [].
- This document has **12** pages.

ADVICE

- Read each question carefully before you start your answer.

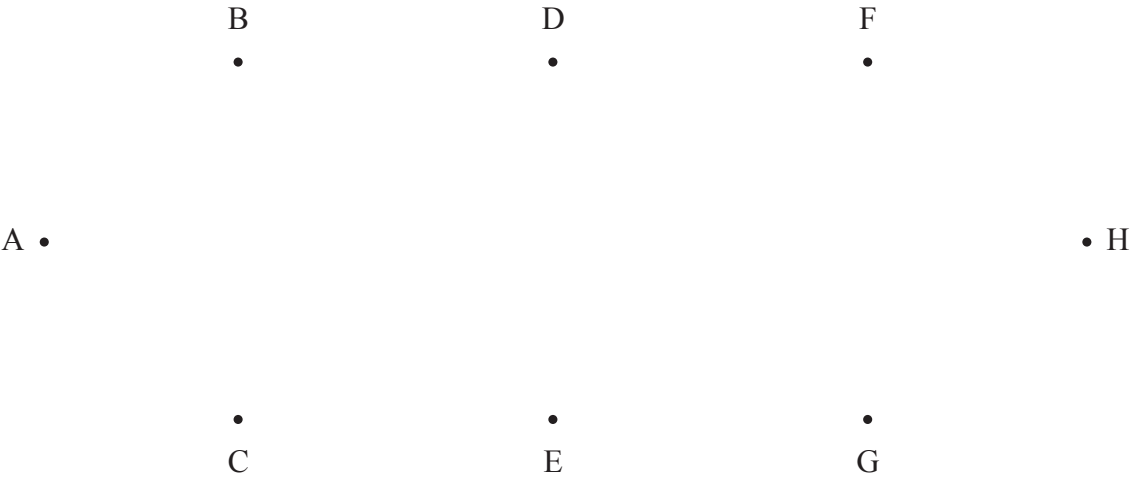
1(b)	
1(c)	
1(d)	
1(e)	

2(a)	
2(b)	
2(c)	

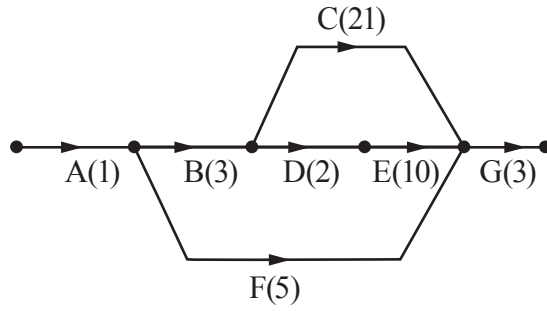
2(d)	Package	A	B	C	D	E	F	G	H	I	J
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2(e)											

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3(b)	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 10%;"></td> <td>A</td> <td>B</td> <td>C</td> <td>D</td> <td>E</td> <td>F</td> <td>G</td> <td>H</td> </tr> <tr> <td>A</td> <td>–</td> <td>3</td> <td>–</td> <td>8</td> <td>–</td> <td>–</td> <td>x</td> <td>–</td> </tr> <tr> <td>B</td> <td>3</td> <td>–</td> <td>5</td> <td>–</td> <td>–</td> <td>–</td> <td>–</td> <td>–</td> </tr> <tr> <td>C</td> <td>–</td> <td>5</td> <td>–</td> <td>4</td> <td>3</td> <td>–</td> <td>–</td> <td>–</td> </tr> <tr> <td>D</td> <td>8</td> <td>–</td> <td>4</td> <td>–</td> <td>5</td> <td>–</td> <td>–</td> <td>9</td> </tr> <tr> <td>E</td> <td>–</td> <td>–</td> <td>3</td> <td>5</td> <td>–</td> <td>7</td> <td>6</td> <td>–</td> </tr> <tr> <td>F</td> <td>–</td> <td>–</td> <td>–</td> <td>–</td> <td>7</td> <td>–</td> <td>–</td> <td>–</td> </tr> <tr> <td>G</td> <td>x</td> <td>–</td> <td>–</td> <td>–</td> <td>6</td> <td>–</td> <td>–</td> <td>2</td> </tr> <tr> <td>H</td> <td>–</td> <td>–</td> <td>–</td> <td>9</td> <td>–</td> <td>–</td> <td>2</td> <td>–</td> </tr> </table>									A	B	C	D	E	F	G	H	A	–	3	–	8	–	–	x	–	B	3	–	5	–	–	–	–	–	C	–	5	–	4	3	–	–	–	D	8	–	4	–	5	–	–	9	E	–	–	3	5	–	7	6	–	F	–	–	–	–	7	–	–	–	G	x	–	–	–	6	–	–	2	H	–	–	–	9	–	–	2	–
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(answer space continued on next page)

3(b)	(continued)
Spare copy of diagram for 3(b)	
	
3(c)(i)	
3(c)(ii)	

4(a)



Minimum project completion time = _____ days

Critical activities:

4(b) First reason:

Second reason:

4(c)

Longest float = _____ days

Interpretation:

5(a)	
5(b)	
5(c)	

6(a)	
6(b)(i)	
6(b)(ii)	
6(b)(iii)	

