Mark Scheme (Final)

January 2026

Pearson Edexcel International Advanced Level In Decision Mathematics D1

WDM11/01A

Edexcel and BTEC Qualifications

Edexcel and BTEC qualifications are awarded by Pearson, the UK's largest awarding body. We provide a wide range of qualifications including academic, vocational, occupational and specific programmes for employers. For further information visit our qualifications websites at www.edexcel.com or www.btec.co.uk. Alternatively, you can get in touch with us using the details on our contact us page at www.edexcel.com/contactus

Pearson: helping people progress, everywhere

Pearson aspires to be the world's leading learning company. Our aim is to help everyone progress in their lives through education. We believe in every kind of learning, for all kinds of people, wherever they are in the world. We've been involved in education for over 150 years, and by working across 70 countries, in 100 languages, we have built an international reputation for our commitment to high standards and raising achievement through innovation in education. Find out more about how we can help you and your students at: www.pearson.com/uk

January 2026
Question Paper Log Number P87588A
Publication Code WDM11_01A_2601_MS

General Marking Guidance

All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.

Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.

Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.

There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.

All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.

Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.

When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.

Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

General Instructions for Marking

1. The total number of marks for the paper is 75.

2. The Edexcel Mathematics mark schemes use the following types of marks:

   'M' marks
   These are marks given for a correct method or an attempt at a correct method.

   M marks are sometimes dependent (DM) on previous M marks having been earned.

   'A' marks
   These are dependent accuracy (or sometimes answer) marks and can only be awarded if the previous M mark has been earned. E.g. M0 A1 is impossible.

   'B' marks
   These are independent accuracy marks where there is no method (e.g. often given for a comment or for a graph)

   A few of the A and B marks may be f.t. – follow through – marks.

3. General Abbreviations

These are some of the traditional marking abbreviations that will appear in the mark schemes.

- bod – benefit of doubt
- ft – follow through
- the symbol $\surd$ will be used for correct ft
- cao – correct answer only
- cso - correct solution only. There must be no errors in this part of the question to obtain this mark
- isw – ignore subsequent working
- awrt – answers which round to
- SC: special case
- oe – or equivalent (and appropriate)
- dep – dependent
- indep – independent
- dp decimal places
- sf significant figures
- $*$ The answer is printed on the paper
- ⌐ The second mark is dependent on gaining the first mark

4. All A marks are 'correct answer only' (cao.), unless shown, for example, as A1 ft to indicate that previous wrong working is to be followed through. After a misread however, the subsequent A marks affected are treated as A ft, but manifestly absurd answers should never be awarded A marks.

5. For misreading which does not alter the character of a question or materially simplify it, deduct two from any A or B marks gained, in that part of the question affected.

6. If a candidate makes more than one attempt at any question:
    - If all but one attempt is crossed out, mark the attempt which is NOT crossed out.
    - If either all attempts are crossed out or none are crossed out, mark all the attempts and score the highest single attempt.

7. Ignore wrong working or incorrect statements following a correct answer.

Question Number	Scheme	Marks
1.		
(a)	$\frac{38.2}{10} = 3.82$ so lower bound is 4 (planks/bins)	M1 A1 **(2)**
(b)	Bin 1: **5.0** **1.8** **2.8** Bin 2: **6.2** **3.0** 0.6 Bin 3: 4.0 3.8 0.8 Bin 4: 2.4 Bin 5: 7.8	**M1** A1 A1 **(3)**
(c)	e.g. Middle Right Pivots 5.0 1.8 6.2 2.8 3.0 **4.0** 3.8 2.4 0.6 0.8 7.8 4.0 5.0 **6.2** 7.8 4.0 1.8 2.8 3.0 **3.8** 2.4 0.6 0.8 6.2, 3.8 7.8 6.2 5.0 4.0 3.8 1.8 2.8 3.0 **2.4** 0.6 0.8 (7.8, 5.0), 2.4 7.8 6.2 5.0 4.0 3.8 2.8 **3.0** 2.4 1.8 **0.6** 0.8 3.0, 0.6 7.8 6.2 5.0 4.0 3.8 3.0 2.8 2.4 1.8 **0.8** 0.6 (2.8), 0.8 7.8 6.2 5.0 4.0 3.8 3.0 2.8 2.4 1.8 0.8 0.6 (1.8)	M1 A1 A1ft A1 **(4)**
	e.g. Middle Left Pivots 5.0 1.8 6.2 2.8 3.0 **4.0** 3.8 2.4 0.6 0.8 7.8 4.0 5.0 **6.2** 7.8 4.0 1.8 2.8 3.0 **3.8** 2.4 0.6 0.8 6.2, 3.8 7.8 6.2 5.0 4.0 3.8 1.8 2.8 **3.0** 2.4 0.6 0.8 (7.8, 5.0), 3.0 7.8 6.2 5.0 4.0 3.8 3.0 1.8 2.8 **2.4** 0.6 0.8 2.4 7.8 6.2 5.0 4.0 3.8 3.0 2.8 2.4 1.8 **0.6** 0.8 (2.8), 0.6 7.8 6.2 5.0 4.0 3.8 3.0 2.8 2.4 **1.8** 0.8 0.6 1.8 7.8 6.2 5.0 4.0 3.8 3.0 2.8 2.4 1.8 0.8 0.6 (0.8)	
(d)	Bin 1: **7.8** 1.8 Bin 2: **6.2** **3.8** Bin 3: **5.0** **4.0** 0.8 Bin 4: **3.0** 2.8 2.4 0.6	**M1** A1 **(2)**
		11 marks

	Notes for Question 1	
	If 5.0 4.0 3.0 written as 5, 4, 3 penalise once only with the first CSO mark earned in a part of the question where they have used 5, 4 or 3	
a1M1	38.2 (30.4 – 46) / 10 total in the range 38.2 +/- 7.8	
a1A1	CAO correct calculation seen or 3.82 and 4 (planks/bins) An answer of 4 with no working is M0. Do not award if any incorrect working seen.	
b1M1	First five numbers placed correctly (the bold numbers) and at least seven numbers put in bins. Condone cumulative totals here only.	
b1A1	First nine numbers placed correctly (bold and underlined) with no repeated or additional values.	
b2A1	CSO – all correct.	
c1M1	Quick sort – pivots, p, selected and first pass gives >p, p, <p. If only choosing 1 pivot per iteration M1 only. Must choose middle item as pivot – any other choice is M0. Bubble sort is M0. If sort ascending this can score a maximum of M1 A1 A0 A0 for fully correct even if then reversed. Condone one additional number/error/omission.	
c1A1	First pass correct and next pivots chosen correctly/consistently for second pass.	
c2A1ft	Second and third passes correct (ft from their first pass and choice of pivots) – next pivots chosen correctly/consistently for fourth pass.	
c3A1	CSO all correct including choice of pivots for the fifth pass (MR) or sixth pass (ML)	
d1M1	Must be using their 'sorted' list in decreasing order. Their first six numbers placed correctly (bold numbers) and at least seven numbers put in bins. First-fit increasing is M0.	
d1A1	CSO – all correct.	

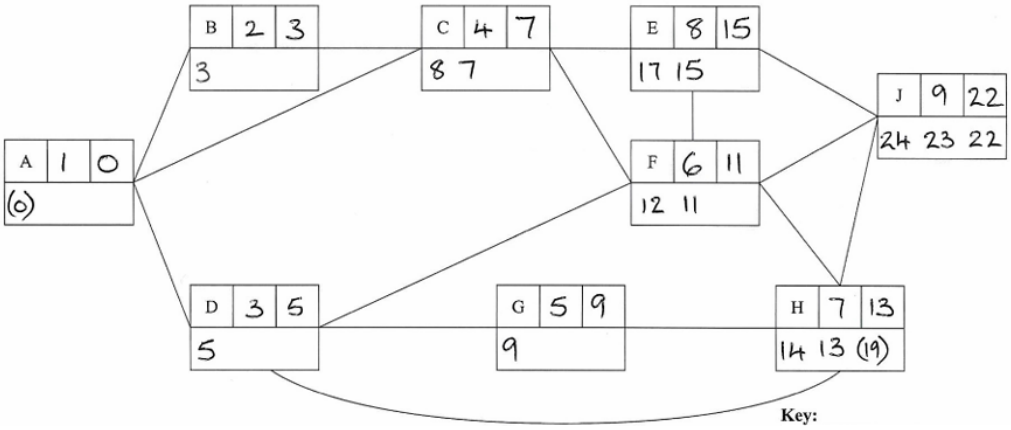
Sort ascending
Middle right

											Pivots
5.0	1.8	6.2	2.8	3.0	**4.0**	3.8	2.4	0.6	0.8	7.8	4.0
1.8	2.8	3.0	**3.8**	2.4	0.6	0.8	4.0	5.0	**6.2**	7.8	3.8, 6.2
1.8	2.8	3.0	**2.4**	0.6	0.8	3.8	4.0	5.0	6.2	7.8	2.4, (5.0, 7.8)
1.8	**0.6**	0.8	2.4	2.8	**3.0**	3.8	4.0	5.0	6.2	7.8	0.6, 3.0
0.6	1.8	**0.8**	2.4	2.8	3.0	3.8	4.0	5.0	6.2	7.8	0.8, (2.8)
0.6	0.8	1.8	2.4	2.8	3.0	3.8	4.0	5.0	6.2	7.8	

Middle left

											Pivots
5.0	1.8	6.2	2.8	3.0	**4.0**	3.8	2.4	0.6	0.8	7.8	4.0
1.8	2.8	3.0	**3.8**	2.4	0.6	0.8	4.0	5.0	**6.2**	7.8	3.8, 6.2
1.8	2.8	**3.0**	2.4	0.6	0.8	3.8	4.0	5.0	6.2	7.8	3.0, (5.0, 7.8)
1.8	2.8	**2.4**	0.6	0.8	3.0	3.8	4.0	5.0	6.2	7.8	2.4
1.8	**0.6**	0.8	2.4	2.8	3.0	3.8	4.0	5.0	6.2	7.8	0.6, (2.8)
0.6	**1.8**	0.8	2.4	2.8	3.0	3.8	4.0	5.0	6.2	7.8	1.8
0.6	0.8	1.8	2.4	2.8	3.0	3.8	4.0	5.0	6.2	7.8	

Question Number	Scheme	Marks
2.(a)	AB, BC, CF, CE; FG, AD; EH, HI	M1 A1 A1 **(3)**
(b)	(£)191	B1 **(1)**
(c)	(BC EF) CF, reject CE, AB, FG; {AD, reject AC}, reject DG, {reject BE and DF}, EH, reject FH, HI, (reject GI FI) **(Note BC and EF are already in the tree and may be listed before CF)**	M1 A1 A1 **(3)**
(d)	(£)147	B1 **(1)**
		8 marks
	Notes for Question 2	
a1M1	First four arcs (AB, BC, CF, CE) correctly chosen, or first five nodes ABCFE chosen in order. If any rejections seen M1 only. If Prim starting at any other node M1 only for the correct first four arcs (not nodes).	
a1A1	First six arcs (AB, BC, CF, CE; FG, AD) correctly chosen, or all nodes in order ABCFEGDHI.	
a2A1	CSO (must be arcs)	
b1B1	CAO	
c1M1	First three arcs (CF, AB, FG) correctly chosen and at least one rejection seen at some point. (Kruskal not Prim.) **We do not need to see BC and EF added to the tree.**	
c1A1	All arcs in tree selected correctly at correct time. **Ignore any reference to BC and EF.**	
c2A1	CSO including all rejections correct (GI and FI do not need to be explicitly rejected) and at the right time. **Penalise any reference to BC and EF unless correctly added before CF.**	
d1B1	CAO	

Question Number	Scheme	Marks
3.		
(a)		
		M1 A1 (ABDC) A1(GFH) A1ft (EJ)
	Shortest route: A – B – C – F – E – J	A1
	Length: 22 (metres)	A1ft
		(6)
(b)		
	A(BCF)E + F(E)J = 15 + 11 = 26 A(BC)F + EJ = 11 + 7 = 18* A(BCFE)J + EF = 22 + 4 = 26	M1 A1ft A1
	Arcs AB, BC, CF, EJ will be traversed twice	A1
		(4)
(c)		
	Route: e.g. **ABA**DGHDFH**JEJ**FE**CFCBC**A	B1
	Length: 100 + 18 = 118	B1ft
		(2)
(d)		
	(Start/finish at) E/J, **or** (start/finish at) C/J (one pair stated) (Start/finish at) E/J, **and** (start/finish at) C/J (both pairs stated)	M1 A1
	Length: 100 – 3 – 4 + 4 = 97 (metres)	A1
		(3)
		[15]

Notes for Question 3

In (a) it is important that all values at each node are checked very carefully – the order of the working values must be correct for the corresponding A mark to be awarded e.g. at J the working values must be 24 23 22 in that order (so 24 22 23 is incorrect)

It is also important that the order of labelling is checked carefully – some candidates start with a label of 0 at A (rather than 1) – which is fine. Also the order of labelling must be a strictly increasing sequence – so 1, 2, 3, 3, 4,… will be penalised once (see notes below) but 1, 2, 3, 5, 6,… is fine. Errors in the final values and working values are penalised before errors in the order of labelling

a1M1: A larger value replaced by a smaller value in at least two of the working value boxes at either C or E or F or H or J

a1A1: All values at A, B, D and C correct and working values in the correct order. Condone lack of 0 in As working value

a2A1: All values at G, F and H correct and the working values in the correct order. Penalise order of labelling only once per question (G, F and H must be labelled in that order and G must be labelled after A, B, D and C)

a3A1ft: All values at E and J correct on the follow through and the working values in the correct order. Penalise order of labelling only once per question. To follow through E check that the working values at E follow from the candidate's final values from the feeds into E (which will come from nodes C and F (in the order in which the candidate has labelled them)) and that the final value, and order of labelling, follows through correctly. Repeat this process for J (which will possibly have working values from F, H and E with the order of labelling determined by the candidate's order of labelled at F, H and E)

a4A1: CAO (accept in terms of arcs) (do accept route from J to A)

a5A1ft: ft their final value at J (if 22 stated and 22 is not the final value at J then A0)

If route and length are written on the wrong lines this can still score both marks

b1M1: The correct three pairings of the correct four nodes (A, E, F and J)

b1A1ft: Two rows correct including pairings and totals follow through their final values at E, F and J

b2A1: All three rows correct including pairings and totals

b3A1: Correct repeats (AB, BC, CF, EJ) must be arcs so do not accept ABCF and EJ

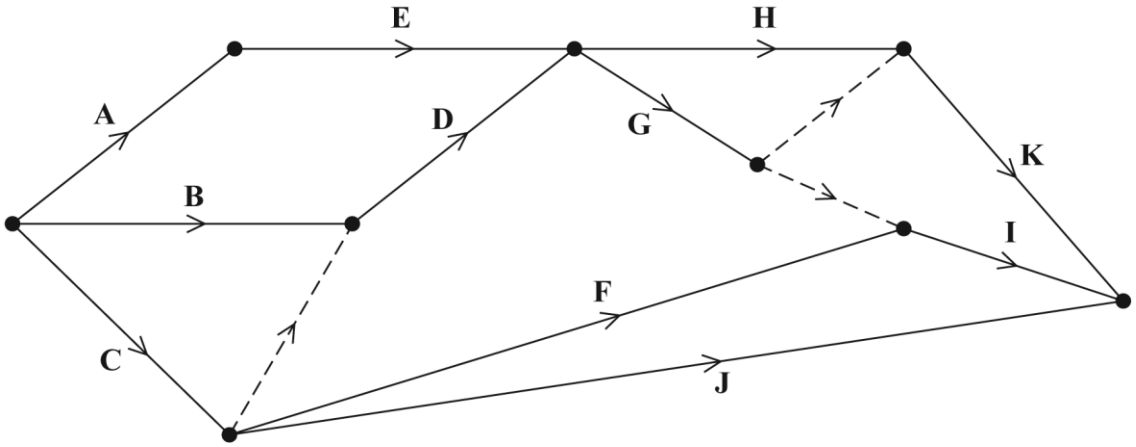
c1B1: CAO – must be 20 vertices starting and finishing at A with correct repeats (shown in bold) and visiting every vertex (may be in terms of arcs)

c2B1ft: Length of route correct on the follow through (100 + smallest repeat) but must be from a choice of 3 totals from the correct 3 pairs of vertices

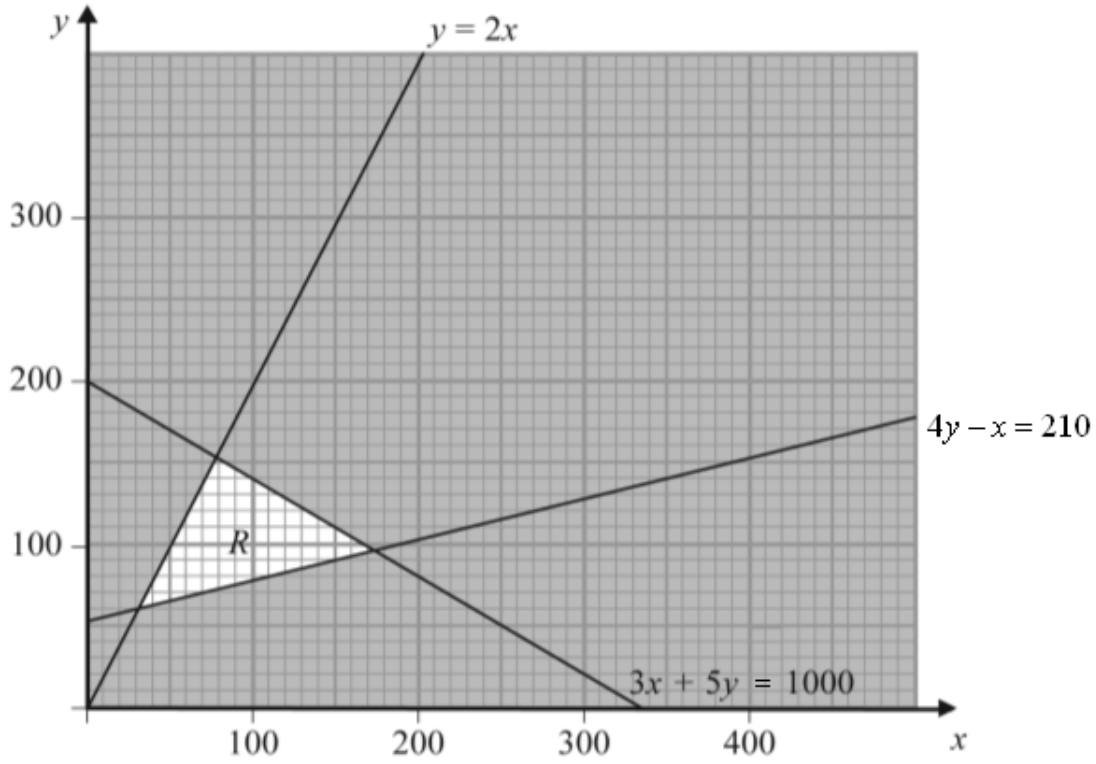
d1M1: One correct pair (E and J or C and J)

d1A1: Both pairs correct – accept as a minimum EJ and CJ without any comment on start/finish

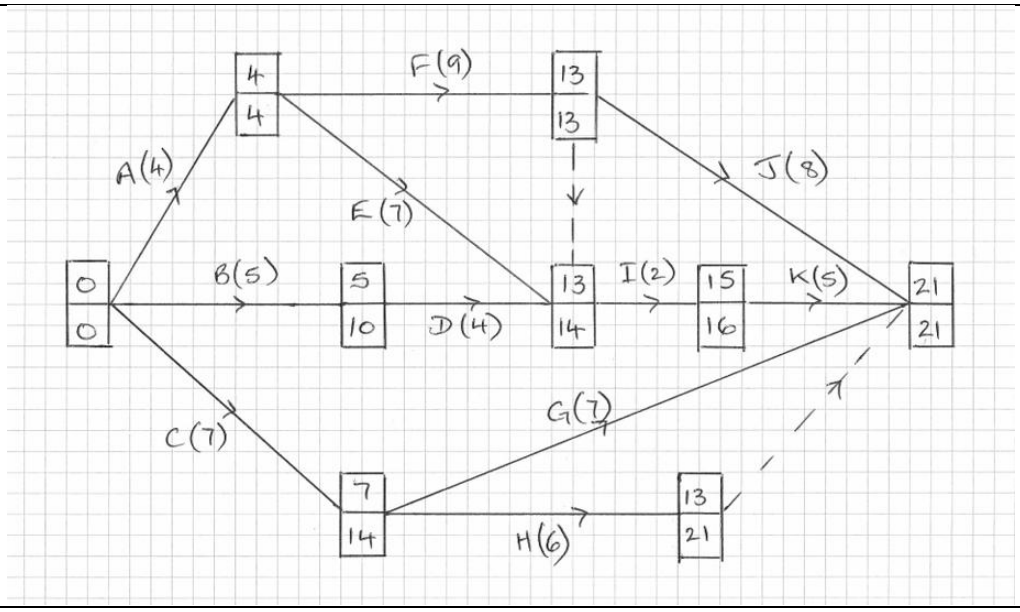
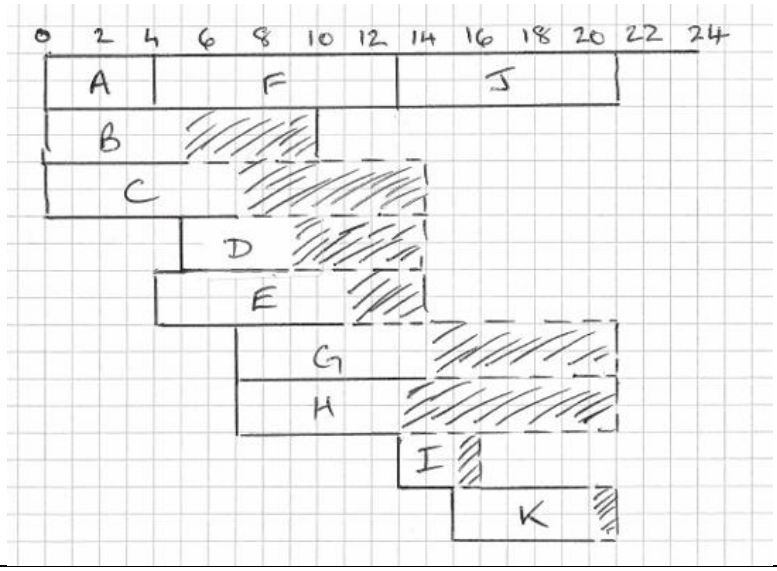
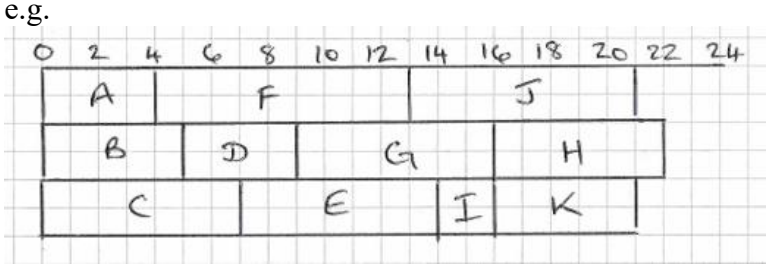
d2A1: CAO (97)

Question Number	Scheme	Marks
4.		M1 A1 A1 A1 A1 (5)
		[5]

	Notes for Question 4	
	Condone lack of, or incorrect, numbered events throughout. 'Dealt with correctly' means that the activity starts from the correct event but need not necessarily finish at the correct event, e.g. 'H dealt with correctly' requires the correct precedences for this activity, i.e. D and E labelled correctly and leading into the same node and H starting from that node but do not consider the end event. **Activity on node is M0**	
	If an arc is not labelled, for example, if the arc for activity E is not labelled (but the arc is present) then this will lose the first A mark and the final (CSO) A mark – they can still earn the second A mark on the bod. If two or more arcs are not labelled then mark according to the scheme. Assume that a solid line is an activity which has not been labelled rather than a dummy (even if in the correct place for where a dummy should be). **Ignore incorrect or lack of arrows on the activities for the first four marks only**	
	If two activities are labelled with the same letter and one is in the correct position for this activity please award the A mark on BOD, but penalise the second incorrectly labelled activity.	
a1M1	Eight activities (labelled on arc), one start and at least two dummies placed	
a1A1	Activities A, B, C, 1st dummy (including correct arrow), D, and E dealt with correctly	
a2A1	Activities F, G, H and J dealt with correctly	
a3A1	Activities I and K dealt with correctly and both dummies from the end of G to end of F and end of H (including correct arrows)	
a4A1	CSO – all arrows correctly placed for each activity with one finish and exactly three dummies	
	Please check all arcs carefully for arrows – if there are no arrows on any dummies then M1 only. **Note that additional (but unnecessary) 'correct' dummies that still maintain precedence for the network should only be penalised with the final A mark if earned.**	

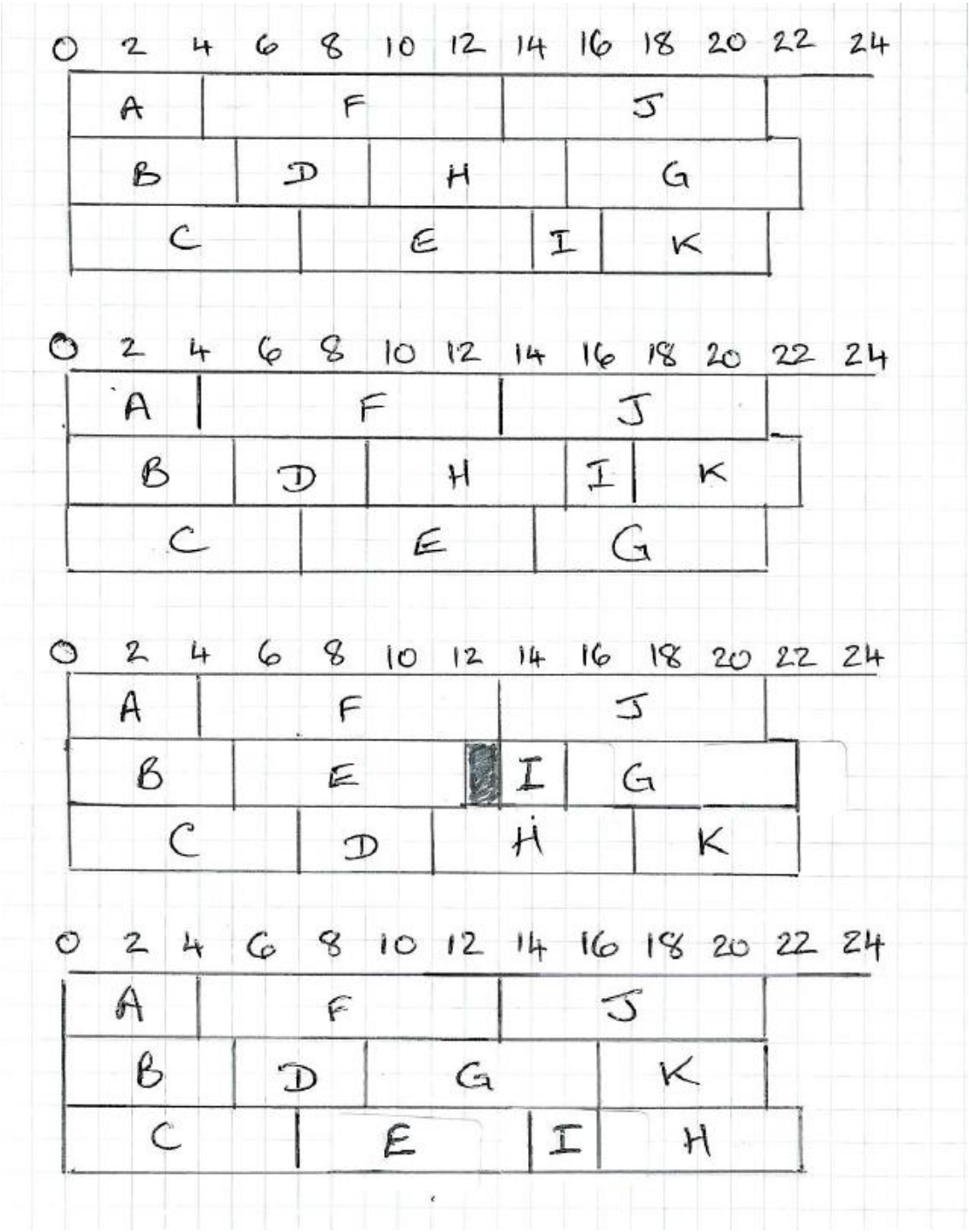
Question Number	Scheme	Marks
5. (a)	$3x + 5y \leq 1000$	B1 **(1)**
(b)		B1 B1 B1 dB1 **(4)**
(c)	Objective is to maximise (P =) x + y	B1 **(1)**
(d)	$(A=)\ (30, 60)$, $(B=)\left(76\frac{12}{13},\ 153\frac{11}{13}\right)\left(\frac{1000}{13},\ \frac{2000}{13}\right)$, $(C=)\left(173\frac{9}{17},\ 95\frac{15}{17}\right)\left(\frac{2950}{17},\ \frac{1630}{17}\right)$ At A, P = 90 At B, P = $230\frac{10}{13}\left(\frac{3000}{13}\right)$ At C, P = $269\frac{7}{17}\left(\frac{4580}{17}\right)$ So C is optimal point Testing integer solutions around C, $4y - x \geqslant 210$ | $3x + 5y \leqslant 1000$ | $(P=)\ x + y$ (173, 95) | 207 (N) | (994 (Y)) | (268) (173, 96) | 211 (Y) | 999 (Y) | 269 (174, 95) | 206 (N) | (997 (Y)) | (269) (174, 96) | (210 (Y)) | 1002 (N) | (270) $x = 173$ and $y = 96$ is optimal integer solution, so they should make 173 soft toys and 96 craft sets	dM1 A1 A1 ddM1 A1 M1 A1 **(7)**

		(13)
	Notes for Question 5	
(a)	**B1:** CAO	
(b)	**All lines should be within half a small square of the stated points and must be long enough to fully define the feasible region (if necessary the line should be extended to the stated points)** **1B1:** 3x + 5y = 1000 drawn CAO (if correct passes through (0, 200) and (300, 20)) **2B1:** y = 2x drawn CAO (if correct passes through (0, 0) and (100, 200)) **3B1:** 4y – x = 210 drawn CAO (if correct passes through (30, 60) and (150, 90))	
(c)	**4dB1:** *R* labelled with correct shading, either consistently outside the region or inside the region **(dependent on all three lines correct)**	
(d)	**B1:** maximise (accept max but not maximum) and **(P=)** $x + y$ **1dM1:** Attempt to solve two pairs of the above equations simultaneously (may be using calculator, so no working may be seen, but do not accept 3 pairs of coordinates with integer values which have been read off the graph. The correct three pairs of coordinates implies M1A1A1) **(dependent on scoring at least 2/4 in (b))** **1A1:** At least 1 correct *R* vertex found awrt 1dp (76.9, 153.8) (173.5, 95.9) **2A1:** All correct *R* vertices but must be exact values $(A=)\ (30, 60)$ $(B=)\left(76\frac{12}{13},\ 153\frac{11}{13}\right)\left(\frac{1000}{13},\ \frac{2000}{13}\right)(C=)\left(173\frac{9}{17},\ 95\frac{15}{17}\right)\left(\frac{2950}{17},\ \frac{1630}{17}\right)$ **2ddM1:** Attempt to evaluate at least 2 points in $x + y$ (may be using calculator, so no working may be seen – the correct three values implies M1A1) **(dependent on previous M mark)(condone use of integer coordinates here)** **3A1:** The 2 correct P values for B and C either exact or awrt 1 dp (230.8, 269.4) $(230\frac{10}{13}, 269\frac{7}{17})$ **3M1:** Attempt to test at least two integer points around their "C" in both inequalities or one failed inequality. (Accept a clear indication that the point has been tested against the inequalities such as a tick or cross without explicitly stating the numerical values) **4A1:** CAO – must be in context, so do **not** accept x = 173 and y = 96 or (173, 96)	

Question Number	Scheme	Marks
6(a)		M1 A1 M1 A1 **(4)**
(b)	21 (hours)	B1 **(1)**
(c)	$\frac{4+5+7+4+7+9+7+6+2+5+8}{21} = \frac{64}{21} \approx 3.048$ so at least 4 workers required	M1 A1 **(2)**
(d)		M1 A1 A1 A1 **(4)**
(e)	e.g.  see alternatives below	M1 A1ft A1 **(3)**
		14 marks

<table>
<tr><th></th><th>Notes for Question 6</th><th></th></tr>
<tr><td>a1M1</td><td>All top boxes complete, values generally increasing in the direction of the arrows (‘left to right’), condone one rogue value which is a number in a top box greater than the subsequent value</td><td></td></tr>
<tr><td>a1A1</td><td>CAO (top boxes)</td><td></td></tr>
<tr><td>a2M1</td><td>All bottom boxes complete, values generally decreasing in the opposite direction of the arrows (‘right to left’), condone one rogue value which is a number in a bottom box greater than the previous value. Condone missing 0 and/or their 21 (at the end event) for the M mark only</td><td></td></tr>
<tr><td>a2A1</td><td>CAO (bottom boxes)</td><td></td></tr>
<tr><td>b1B1</td><td>CAO</td><td></td></tr>
<tr><td>c1M1</td><td>64 (+/-9)/”21” a calculation using the sum of the activities (accept a total in the range 55 – 73) divided by their finish time or sight of awrt 3.05 (accept 3.04 truncated)</td><td></td></tr>
<tr><td>c1A1</td><td>CAO – 4 note an answer of 4 with no working is M0</td><td></td></tr>
<tr><td>d1M1</td><td>Cascade Chart not a schedule. At least 7 activities including at least 4 floats</td><td></td></tr>
<tr><td>d1A1</td><td>Critical activities (AFJ) correct and at least 3 non-critical activities correct</td><td></td></tr>
<tr><td>d2A1</td><td>At least 6 non-critical activities correct</td><td></td></tr>
<tr><td>d3A1</td><td>CAO All 11 activities present (just once). No errors.</td><td></td></tr>
<tr><td>e1M1</td><td>Schedule not a cascade (Gantt) chart. 3 ‘workers’ used at most and at least 8 activities placed.</td><td></td></tr>
<tr><td>e1A1ft</td><td>All 11 activities present (just once) with a finish time of 22 (ft their end time + 1). Condone at most two errors. An activity can give rise to at most three errors; one on duration, one on time interval and only one on IPA</td><td></td></tr>
<tr><td>e2A1</td><td>3 workers. All 11 activities present (just once). No errors.
The table shows the possible time intervals to allow the project to be completed by 3 workers in 22 hours
<table>
<tr><th>Activity</th><th>Time Interval</th><th>IPA</th><th>Duration</th></tr>
<tr><td>A</td><td>0 to 5</td><td>-</td><td>4</td></tr>
<tr><td>B</td><td>0 to 6</td><td>-</td><td>5</td></tr>
<tr><td>C</td><td>0 to 8</td><td>-</td><td>7</td></tr>
<tr><td>D</td><td>5 to 15</td><td>B</td><td>4</td></tr>
<tr><td>E</td><td>4 to 15</td><td>A</td><td>7</td></tr>
<tr><td>F</td><td>4 to 14</td><td>A</td><td>9</td></tr>
<tr><td>G</td><td>7 to 22</td><td>C</td><td>7</td></tr>
<tr><td>H</td><td>7 to 22</td><td>C</td><td>6</td></tr>
<tr><td>I</td><td>13 to 17</td><td>D, E, F</td><td>2</td></tr>
<tr><td>J</td><td>13 to 22</td><td>F</td><td>8</td></tr>
<tr><td>K</td><td>15 to 22</td><td>I</td><td>5</td></tr>
</table></td><td></td></tr>
</table>

Possible alternative schedules for (e). This is not exhaustive.



Note: it is possible to swap J with I and K (I starts at 14) in the top diagram (and in the main scheme), J with G in the second diagram, J with I and G (J starts at 13) in the third diagram and J with I and H (I starts at 14) in the bottom diagram.

7.		
(a)	Maximise ($P=$) $0.75x + 1.2y + 1.45z$	B1
	Subject to $x+z<200$	B1
	$5y \geqslant 2x$	M1 A1
	$\frac{3}{4}(x + y + z) \geqslant y \quad \Rightarrow \quad 3x + 3z \geqslant y$ $(x, y, z \geqslant 0)$	M1 A1 **(6)**
(b)	Use $x=100, z=25$ to obtain two values of y, leading to $40 \leqslant y \leqslant 375$ Minimum profit (£)159.25, Maximum profit (£)561.25	M1 A1ft A1 **(3)**
		9 marks
	Notes for Question 7	
a1B1	CAO objective function (oe) + maximise (accept max but not maximum) Do not ISW if converted to integer coefficients without a correct multiple of P.	
a2B1	CAO ($x+z<200$)	
a1M1	$5y \square 2x$ where $\square$ is any inequality (accept $2.5y \square x$ o.e. for M1 only) or special case $2y \geqslant 5x$ (must be integers)	
a1A1	CAO ($5y \geqslant 2x$)	
a2M1	$\frac{3}{4}(x+y+z) \square y$ where $\square$ is any inequality If they use 75% only award this mark when this is converted to a fraction or decimal (which may be implied by the correct fully simplied inequality)	
a2A1	CAO ($3x + 3z \geqslant y$) (or equivalent rearrangement, but must be fully simplified)	
b1M1	Obtaining two values of y (by substituting $x=100$ and $z=25$ into **their** inequalities but not $y \geq 0$)	
b1A1ft	Correct maximum and minimum values for y (ft y for the special case $2y \geqslant 5x$ only; accept if $y \geq 2.5x$ seen in (a)) either as inequalities or stated values (If they have $2y \geqslant 5x$ their minimum value is 250)	
b2A1	CAO on minimum and maximum profit (The correct minimum and maximum values with no incorrect working seen implies M1 A1 A1)	

Pearson Education Limited. Registered company number 872828
with its registered office at 80 Strand, London, WC2R 0RL, United Kingdom