

Surname		Centre Number	Candidate Number
Other Names			0



GCSE

4370/04

MATHEMATICS – LINEAR
PAPER 2
FOUNDATION TIER

A.M. THURSDAY, 4 June 2015
1 hour 45 minutes



S15-4370-04

C D E F G
61 48 35 23 10

ADDITIONAL MATERIALS

A calculator will be required for this paper.

A ruler, a protractor and a pair of compasses may be required.

INSTRUCTIONS TO CANDIDATES

Use black ink or black ball-point pen. Do not use gel pen or correction fluid.

Write your name, centre number and candidate number in the spaces at the top of this page.

Answer **all** the questions in the spaces provided.

If you run out of space, use the continuation page at the back of the booklet, taking care to number the question(s) correctly.

Take π as 3.14 or use the π button on your calculator.

INFORMATION FOR CANDIDATES

You should give details of your method of solution when appropriate.

Unless stated, diagrams are not drawn to scale.

Scale drawing solutions will not be acceptable where you are asked to calculate.

The number of marks is given in brackets at the end of each question or part-question.

You are reminded that assessment will take into account the quality of written communication (including mathematical communication) used in your answer to question 10.

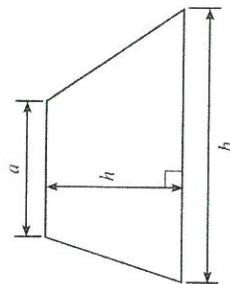


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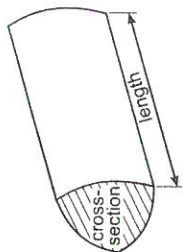
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CJ/S15-4370-04

Formula List



$$\text{Area of trapezium} = \frac{1}{2} (a + b)h$$



$$\text{Volume of prism} = \text{area of cross-section} \times \text{length}$$



1. (a) Chris goes shopping. Complete his bill. [4]

Item	Cost
4 litres of milk @ £0.89 per litre	£ 3.56
6 cartons of apple juice @ £2.47 per carton	£ 14.82
5 packets of biscuits @ £1.67 per packet	£ 8.35
3 boxes of tea @ £4.49 per box	£ 13.47
Total	£ 40.20

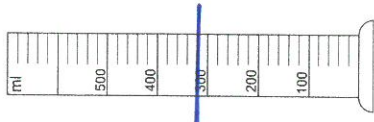
- (b) Chris is given a 5% discount.
How much is this discount? [2]

$$0.05 \times 40.20 = £2.01$$

2. Circle the quantity that is an appropriate estimate for each of the following. [4]

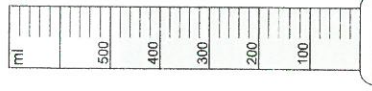
Width of a football pitch	50 km	50 m	50 mm	50 cm
Weight of a man	70 kg	70 g	70 mg	7 kg
Volume of tea in a cup	1 litre	25 cm ³	250 ml	1 ml
Area of a page in a book	3 m ²	300 cm ²	30 mm ²	300 cm ³

3. (a) The diagram shows an empty measuring cylinder with markings in millilitres. Three hundred and twenty millilitres of water are poured into the cylinder. Draw a line on the cylinder to show the water level. [1]



$$100 \div 5 = 20$$

- (b) A very small jug is filled with water. The water is then poured into an empty measuring cylinder. This process is carried out a total of six times. The final water level is shown in the diagram. How much water does the jug hold? [3]



$$480 \div 6 = 80 \text{ ml}$$

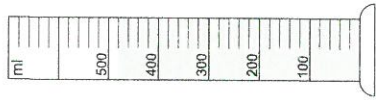


03



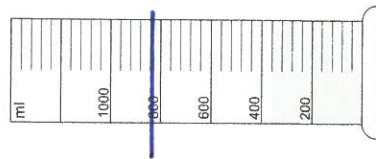
04

- (c) The water in the cylinder on the left is to be poured into the cylinder on the right, which already has some water in it. Draw a line on the right-hand cylinder to show the new water level. [2]



480ml

+



360ml = 840

B1

$$200 \div 5 = 40 \text{ ml}$$

B1

040005

A170



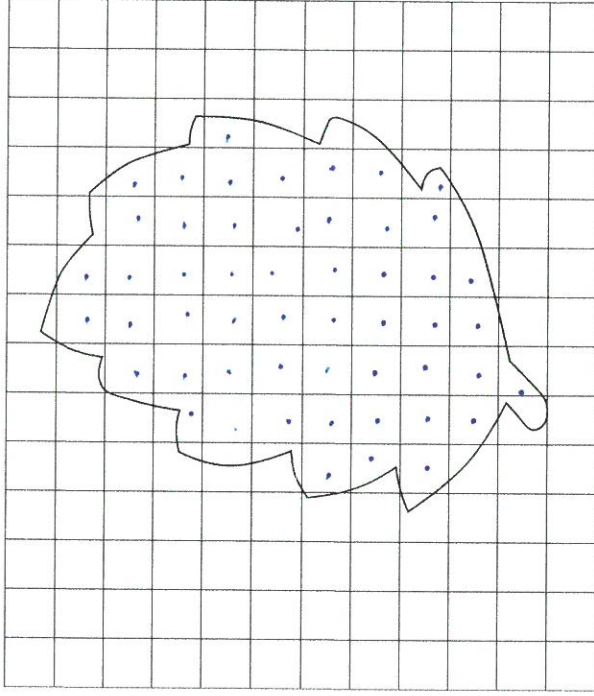
05

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(4370-04)

Turn over.

4. (a)



The above shape is the outline of a leaf.
It is drawn on a square grid where each square represents 4 cm^2 .
Estimate the area of the surface of the leaf.

Count squares at least half covered.

$$52 \text{ squares} \times 4 =$$

208

Area of the surface of the leaf = cm^2

M1

A1

B1

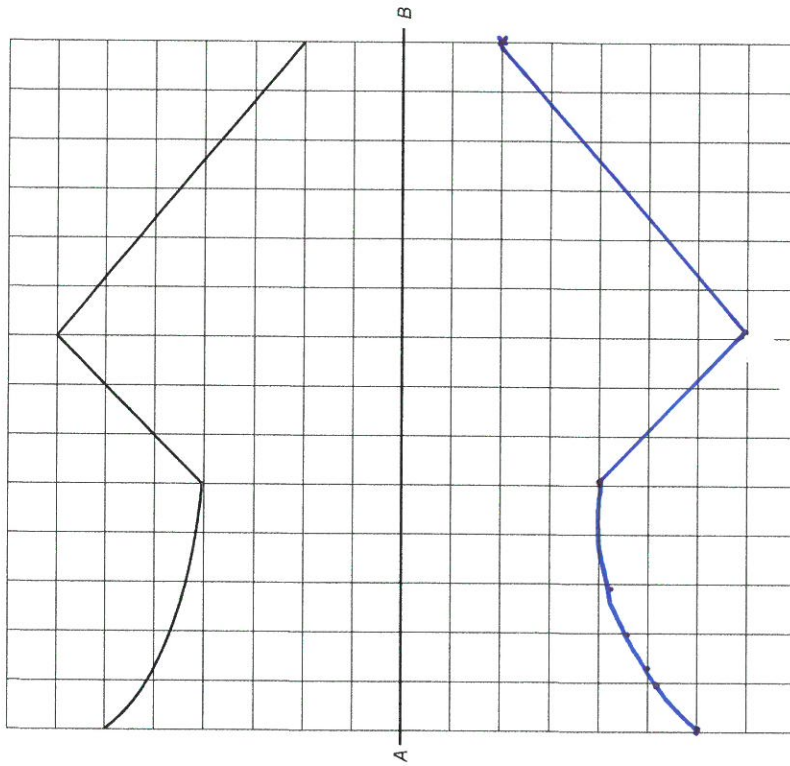
49
54

06

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(4370-04)

- (b) Complete the following figure so that it is symmetrical about the line AB. [2]



B1

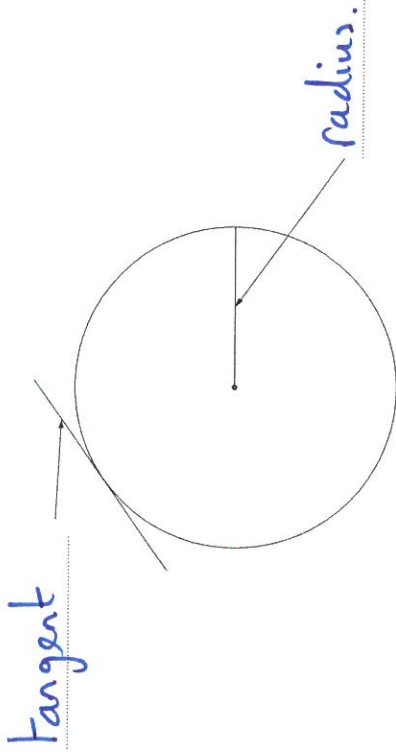
B1

4370
040007



07

5. (a) Write down the special names of the straight lines shown in the following diagram. [2]



Tangent

radius.

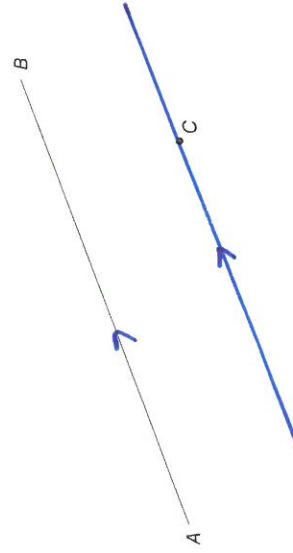
B1

B1

- (b) (i) Measure, in centimetres, the length of the line AB. [1]

Length of AB = 6.3 cm

B1



B1

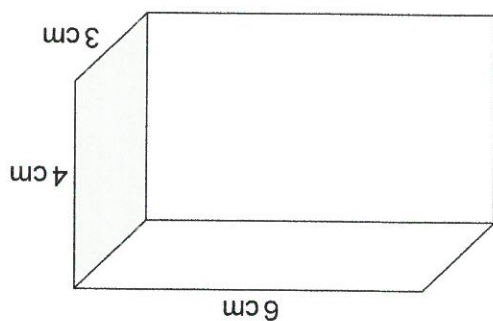
- (ii) Draw a line parallel to AB that passes through C. [1]



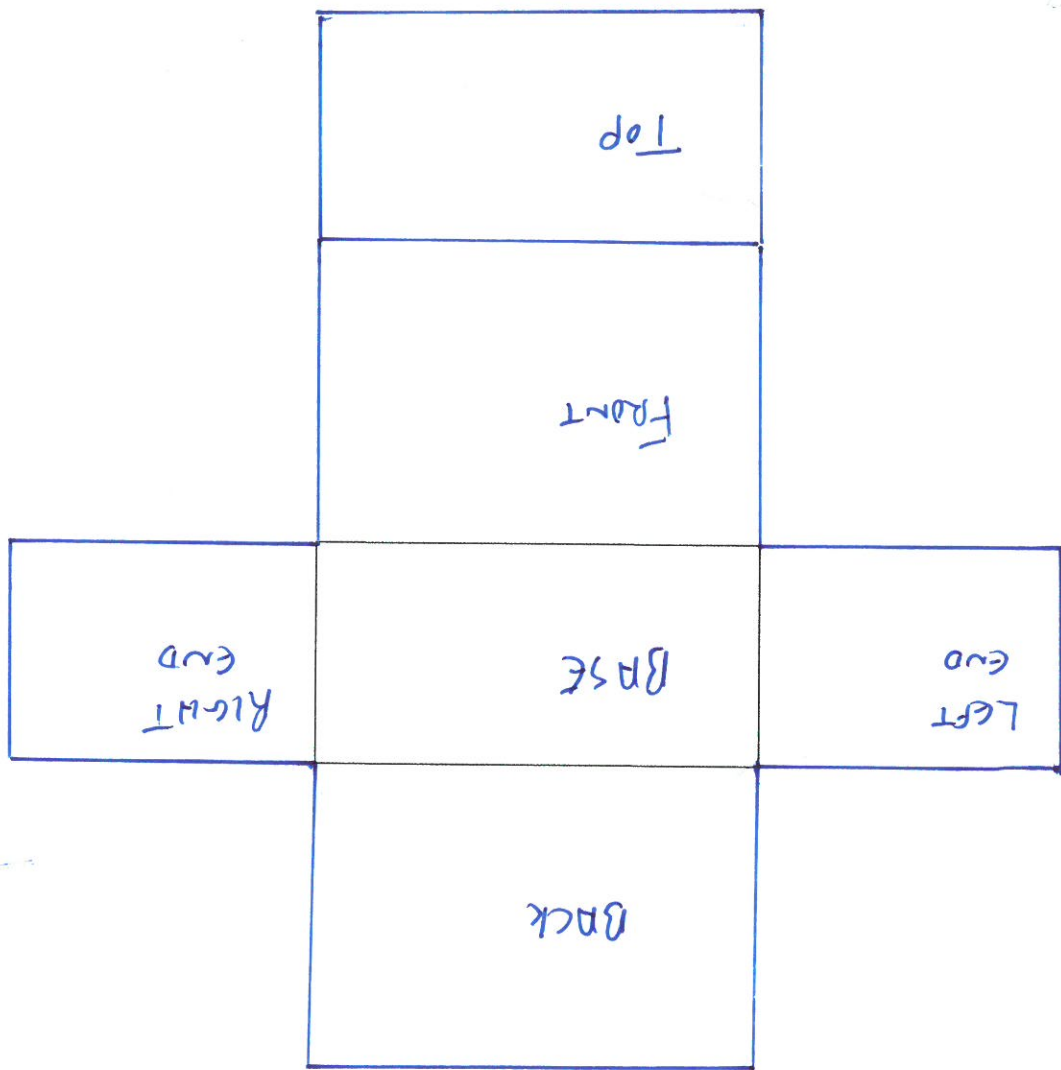
08



7. The diagram shows a cuboid with measurements as shown.



Draw an accurate net for the cuboid.
A 6 cm by 3 cm face has been drawn for you.



[4]

Examiner
only

6. (a) Draw a circle around all of the following quantities that are equal to $\frac{2}{5}$. [2]

$$\frac{10}{15}$$

$$0.4$$

$$\frac{6}{15}$$

$$\frac{8}{10}$$

$$\frac{4}{10}$$

- (b) One thousand apples are put into crates. Each crate can hold 72 apples. How many crates can be filled and how many apples will be left over? [2]

$$\frac{2}{5} = 0.4$$

$$1000 \div 72 = 13.8$$

13 full crates with 936 apples
leave 64 apples over

- (c) What is 7% written as a decimal? [1]

$$0.07$$

- (d) Calculate 48% of 82.5. [2]

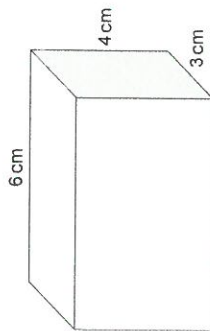
$$0.48 \times 82.5 = 39.6$$

- (e) Calculate $\frac{3}{7}$ of 84. [2]

$$36$$

Examiner
only

7. The diagram shows a cuboid with measurements as shown. [4]



Draw an **accurate** net for the cuboid.
A 6 cm by 3 cm face has been drawn for you.



Examiner only

8. (a) Describe in words the rule for continuing each of the following sequences.

(i) 46 41 36 31 26 21

Rule:

Subtract five from previous number

(ii) 1 -4 16 -64 256

Rule:

$\times -4$ multiplying previous number by negative four

(b) (i) A shirt has h buttons. Write down, in terms of h , the number of buttons on 10 shirts.

6×10 or 10×6 or $10h$

(ii) A total of k blocks are arranged in rows of 5 blocks. There are no blocks left over. Write down, in terms of k , the number of rows.

$k \div 5$ or $\frac{k}{5}$

Examiner only

9. (a) Before 2010, the lowest temperature ever recorded on Earth was -89.2°C . In August 2010, a new record low temperature of -93.2°C was recorded. What is the difference between these temperatures?

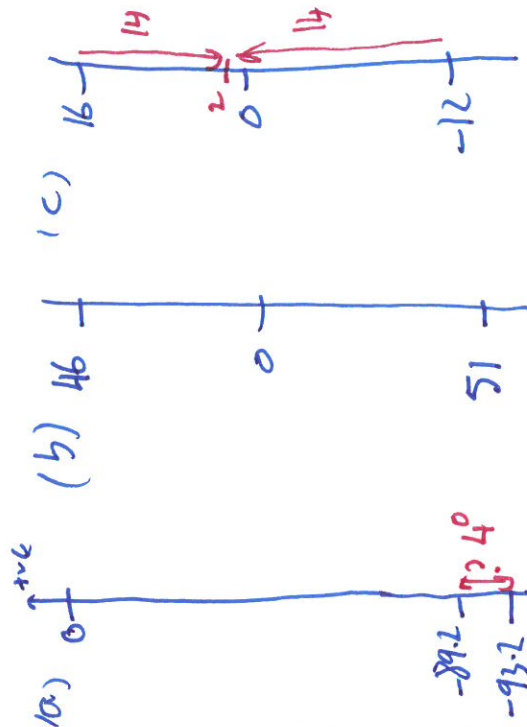
4°

(b) On July 2 1936, a temperature of 46°C was recorded in Minnesota, USA. On February 2 1996, a temperature of -51°C was recorded in Minnesota. What is the difference between these temperatures?

97°

(c) What temperature is mid-way between -12°C and 16°C ?

2°



Turn over.

10. You will be assessed on the quality of your written communication in this question.

The table below gives the charges for hiring a concrete mixer by the day.

Charge for the first day	Charge per day after the first day
£16.10	£8.15

There are special offers for hiring the concrete mixer for a weekend or from Monday to Friday.

Weekend (Saturday & Sunday)	Week (Monday to Friday)
£22.54	£32.20

James wants to hire a concrete mixer from Monday to Thursday. How much cheaper is it to hire a concrete mixer for a week (Monday to Friday) than it is to hire it from Monday to Thursday by the day? [6]

$M_{on} \rightarrow Thurs = 4 \text{ days}$

this will cost $16.10 + (3 \times 8.15) = £40.55$ M1 A1

Weekly cost is £32.20

So you will save $40.55 - 32.20 = £8.35$ M1 A1

by hiring for a week

02



11. The ages of 8 members of a chess club were:

28 . 15 . 60 . 39 . 47 . 31 . 24 . 32 .

(a) Find the median of their ages. [2]

15 24 28 31 32 39 47 60

Median 31.5

(b) Find the range of their ages. [1]

$60 - 15 = 45$

(c) Find the mean of their ages. [3]

Total = 276

Mean = $276 \div 8 = 34.5$

(d) A new member, aged 31, joins the club. What will happen to the mean age? Tick (✓) the appropriate box. [2]

The mean will increase	
The mean will stay the same	
The mean will decrease	✓

Explain your choice.

because he is younger than the means so his age will reduce the mean.



12. Theo went on holiday to Brunei.

- (a) He changed £950 into Brunei dollars (BND) when the exchange rate was £1 = 2.12 BND. How many Brunei dollars (BND) did he receive? [2]

$$950 \times 2.12 = 2014 \text{ BND}$$

- (b) Whilst on holiday, he went on a trip which cost 180 BND. What was the cost of the trip, in pounds? [2]

$$180 \div 2.12 = £84.91$$

13.

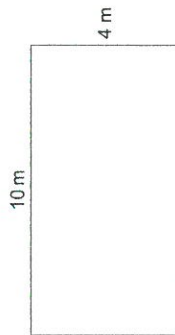


Diagram not drawn to scale

Denise's room is rectangular, measuring 10 metres by 4 metres. She wants to cover the floor with either carpet tiles or wood strips. Carpet tiles are square-shaped, measuring 50 cm by 50 cm. They come in packs of 32 and cost £40 per pack.

Wood strips are rectangular, measuring 2 m by 25 cm. They come in packs of 8 and cost £22 per pack.

Which type of flooring would be the cheaper? You must show all your working. [8]

$$\text{Area of room} = 10 \times 4 = 40 \text{ m}^2$$

For carpet tiles, Area = $0.5 \times 0.5 = 0.25 \text{ m}^2$ per tile

$$\text{So no of carpet tiles needed} = 40 \div 0.25 = 160 \text{ tiles}$$

$$\text{No of packs} = 160 \div 32 = 5 \text{ packs @ £40 per pack}$$

$$\text{will cost} = 5 \times 40 = £200 \text{ for tiles}$$

$$\text{For wood strips, Area} = 2 \times 0.25 = 0.5 \text{ m}^2 \text{ per strip}$$

$$\text{So no of strips needed} = 40 \div 0.5 = 80 \text{ strips}$$

$$\text{No of packs} = 80 \div 8 = 10 \text{ packs @ £22 per pack}$$

$$\text{will cost} = 10 \times 22 = £220 \text{ for wood strip}$$

So carpet will be £20 cheaper.



14. (a) Solve the following equation.

[3]

$$2(30 - x) = 44$$

$$60 - 2x = 44$$

$$-2x = 44 - 60$$

$$-2x = -16$$

$$x = \frac{-16}{-2} = 8$$

- (b) Simplify
- $3(4a - 2c) - 2(2a + 4c)$
- .

[2]

$$12a - 6c - 4a - 8c$$

$$8a - 14c$$

- (c) Find all integer values of
- n
- that satisfy the inequality

[3]

$$5 \leq 3n < 18$$

$$\frac{5}{3} \leq n < 6$$

$$1.6 \leq n < 6$$

$$2, 3, 4, 5$$

15. The table below shows some comparative data for 3 different European airlines.



	European Airlines		
	FreeFlight	Best2Fly	GoJet
Percentage of flights arriving on time, based on 30 000 flights	85%	88%	92%
Number of complaints, per 1000 passengers	0.62	0.68	0.78
Number of lost suitcases, per 1000 passengers	0.36	0.24	0.42

Use the information given in the table to answer the following questions.

- (a) FreeFlight, Best2Fly and GoJet all claim to be the best of these 3 airlines. Complete the following statements.

[2]

FreeFlight are the best of these 3 airlines because *only 0.62 complaints per 1000 passengers* **B**

Best2Fly are the best of these 3 airlines because *fewest lost suitcases* **B**

GoJet are the best of these 3 airlines because *92% of their flights arrive on time*



- (b) How many of the 30 000 flights with Best2Fly were late?

12% are late

$$12\% \text{ of } 30000 = 3600$$

$$0.12 \times 30000 =$$

- (c) FreeFlight and GoJet both expect to carry 500 000 passengers next month. How many more suitcases would you expect GoJet to lose than FreeFlight next month?

$$500000 \div 1000 = 500$$

$$\text{So FreeFlight loses } 500 \times 0.36 = 180$$

$$\text{GoJet loses } 500 \times 0.42 = 210$$

So 30 more suitcases

- (d) Write down an estimate for the probability that a flight with GoJet does not arrive on time. Express your answer as a percentage.

8%

16. The diagram below shows a rectangle and a triangle joined by a common side BD.

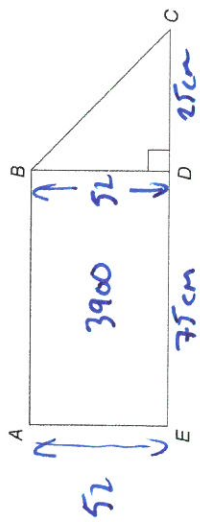


Diagram not drawn to scale

The area of rectangle ABDE is 3900 cm^2 , $ED = 75 \text{ cm}$ and $DC = 25 \text{ cm}$.

Calculate each of the following:

- the area of triangle BDC, and
- the length of BC.

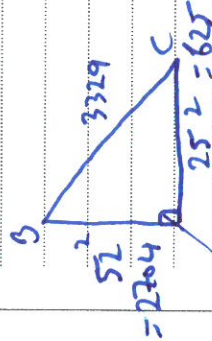
You must show all your working.

[7]

$$AE \times 75 = 3900$$

$$AE = \frac{3900}{75} = 52 \text{ cm}$$

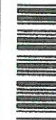
$$\text{Area of } \triangle BDC = \frac{1}{2} \times 25 \times 52 = 650 \text{ cm}^2$$



$$2704 + 625 = 3329$$

$$BC = \sqrt{3329}$$

$$= 57.7 \text{ cm}$$

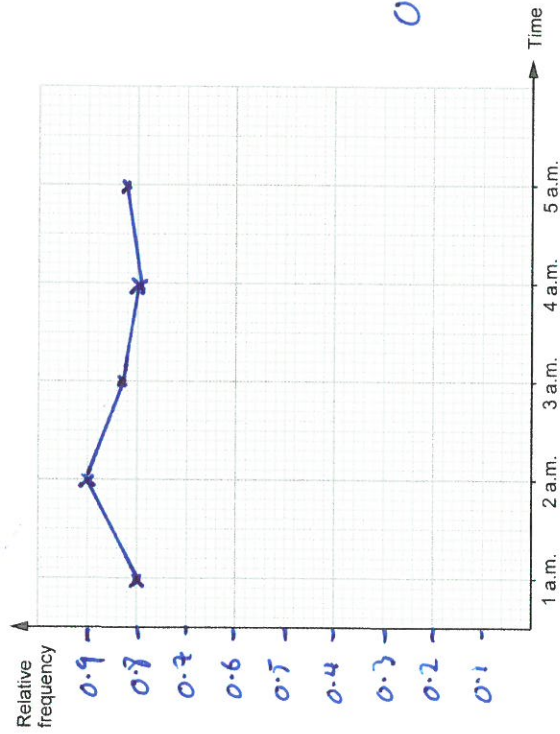


- (b) It is decided to record and plot the relative frequencies for the information shown in the previous table.

- (i) Complete the table below.
Relative frequency must be recorded to 2 decimal places. [2]

	1 a.m.	2 a.m.	3 a.m.	4 a.m.	5 a.m.
Total number of boxes with exactly 8 peaches	8	18	25	32	41
Total number of boxes checked	10	20	30	40	50
Relative frequency	0.80	0.90	0.83	0.80	0.82

- (ii) Use the graph paper below to plot the relative frequencies. [2]



- (iii) A box of peaches is selected at random.
What is the best estimate of the probability that the box contains exactly 8 peaches? [1]

0.82

END OF PAPER



- Question number
- Additional page, if required.
Write the question number(s) in the left-hand margin.



PAPER 2 - FOUNDATION TIER

2015 Summer Linear Paper 2 (Calculator allowed) Foundation Tier	Marks	Comments
1. Parts (a) & (b) marked at the same time (a) (3.56) (milk) 14.82 (apple juice) 8.35 (biscuits) <u>13.47</u> (tea) <u>40.2(0)</u>	✓ B1 B1 B1 B1	F.T. until second error Award B1 for a correct total (F.T.) even if only seen in (b)
(b) 10% = (£) 4.02 5% = (£) 2.01 OR (0).05 × 40.2(0) Discount is (£) 2.01 (I.S.W.)	M1 A1	Any correct method for finding 5%. F.T. their total. Ignore extra decimal places in their answer. Allow 2.01% for A1, but 2.01p gets M1,A0 . If (£)38.19 given then award M1, A1 for implied (£) 2.01. 10%=(£)4, 5% = (£)2 gets M0,A0 not of equivalent diff.
2. Width of pitch 50km (50m) 50mm 50cm Weight (man) (70kg) 70g 70mg 7kg Volume (cup) 1 litre 25 cm ³ (250 ml) 1 ml Area of page 3m ² (300cm ²) 30mm ² 300cm ³	✓ B1 B1 B1 B1	
3. All parts (a) to (c) marked together (a) Water mark at 320 ml	B1	Look at the diagram also in (a) to (c) Water level shown at ONE GRADUATION ABOVE 300 Closer to 320 than 300 OR 340
3. (b) Water level = 480 Water in a jug = 480/6 = 80 (ml) I.S.W.	B1 M1 A1	FT 'their 480'
3. (c) 480 + 360 = 840 Water marked at 840	B1 B1	For 'their 480 from part (b)' + 360 Water level shown at ONE GRADUATION ABOVE 800. F.T. 'their 840', if not a multiple of 200. Closer to 840 than 800 OR 880
4. (a) (Viewed with diagram) Evidence of square counting <u>49 – 54 inclusive</u> <u>196 – 216 inclusive (cm²)</u>	M1 A1 B1	F.T. 'their 49 – 54' × 4 Unsupported answer in the range 196–216 gets 3 marks.
4. (b) Lines Arc	B1 B1	For both lines. F.T. their lines, must have opposite curvature, start at the correct place and end at the start of their line.
5. (a) tangent radius	B1 B1	Accept misspellings as long as recognisable Accept misspellings as long as recognisable
5. (b) (i) 9.5 (cm) to 9.9 (cm) inclusive	B1	
5. (b) (ii) Parallel through C	B1	Watch out for perpendicular(r)s as well as a parallel line which could be their way of 'constructing the parallel line'
6. (a) $\frac{10}{15}$ (0.4) $\frac{6}{15}$ $\frac{8}{10}$ $\frac{4}{10}$	B2	B1 for any 2 correct and up to 1 incorrect OR B1 for all 3 correct and 1 incorrect.
6. (b) 13 (crates) 13 (crates) with 64 (<u>apples left over.</u>)	M1 A1	For 13 or 13.8(88...) OR 1000/72 OR 936 OR repeated subtraction 13 or 14 times. 13×72=936, 64 gets M1,A1 M1,A0 for 14 crates and 64 apples. 14 (crates) OR 64 (apples) on its own get M0,A0
6. (c) (0).07	B1	Do NOT accept 7/100
6. (d) $\frac{48}{100} \times 82.5$ OR (0).48 × 82.5 = 39.6 (<u>I.S.W.</u>)	M1 A1	Any correct method for finding 48% A0 for 39.6%, but allow A1 for £39.6(0)
6. (e) 3 × 12 OR 252 ÷ 7 36	M1 A1	Any correct method which should get 36 C.A.O. Mark final answer. 36/84 gets M1, A0. Premature approximation methods such as 3/7 = (0).42 OR (0).43, then 35.28 or 36.12 gets M1,A0 Unsupported answers other than 36 get M0,A0

2015 Summer Linear Paper 2 (Calculator allowed) Foundation Tier	Marks	Comments
Overlay 7. <u>At least one</u> 6 by 3 rectangle <u>At least two</u> 6 by 4 rectangles <u>At least two</u> 4 by 3 rectangles Makes a valid net	B1 B1 B1 B1	Rectangles must have at least one side in common Notes: Wrong dimensions gets B0; allow $\pm 2\text{mm}$ Ignore 'flaps'. Must be a correct net that would produce a cuboid. Allow this B1 even if only 5 sides (open box)
8. (a) (i) Subtract 5 (from the previous term)	B1	Accept -5 , take away 5. B0 for $n-5$ or $-5n+51$
8. (a) (ii) Multiply (the previous term) by -4	B1	Accept $\times -4$. B0 for $n \times -4$ B1 for (1) multiply by 4 and change sign OR (2) times the previous term by 4 using a positive then minus number pattern OR (3) B1 for times by 4 each time but every other number is negative B0 for 'times 4 add a minus then times 4 take away the minus'
8. (b) (i) $10b$	B1	Accept $b \times 10$ or $b10$. Ignore $b=$ or $=b$ or any other letter B0 for b buttons $\times 10$ shirts. $10b = b = 10$ gets B0.
8. (b) (ii) $k/5$	B1	Allow $k \div 5$. B0 for k blocks / 5 rows Ignore $k=$ or $=k$ or any other letter
9. (a) $4 (^{\circ}\text{C})$	B1	Accept $-4 (^{\circ}\text{C})$
9. (b) $97 (^{\circ}\text{C})$	B1	Accept $-97 (^{\circ}\text{C})$
9. (c) $2 (^{\circ}\text{C})$	B1	
10. Week hire = 32.20 4 day hire = $16.10 + 3 \times 8.15$ = (£)40.55 Difference = $40.55 - 32.20$ = (£) 8.35	M1 A1 M1 A1	FT 'their derived 40.55'
Look for - spelling - clarity of text explanations, - the use of notation (watch for the use of '=', £ being appropriate) QWC2: Candidates will be expected to - present work clearly, with words explaining process or steps AND - make few if any mistakes in mathematical form, spelling, punctuation and grammar and include units in their final answer QWC1: Candidates will be expected to - present work clearly, with words explaining process or steps OR - make few if any mistakes in mathematical form, spelling, punctuation and grammar and include units in their final answer	QWC 2	QWC2 Presents relevant material in a coherent and logical manner, using acceptable mathematical form, and with few if any errors in spelling, punctuation and grammar. QWC1 Presents relevant material in a coherent and logical manner but with some errors in use of mathematical form, spelling, punctuation or grammar . OR Evident weaknesses in organisation of material but using acceptable mathematical form, with few if any errors in spelling, punctuation and grammar. QWC0 Evident weaknesses in organisation of material, and errors in use of mathematical form, spelling, punctuation and grammar.

2015 Summer Linear Paper 2 (Calculator allowed) Foundation Tier	Marks	Comments
All parts (a) to (d) marked together 11. (a) 15 24 28 31 32 39 47 60 Median = 31.5 (years)	M1 A1	For identifying the correct TWO middle numbers OR for arranging the 8 numbers in ascending or descending order. C.A.O. Unsupported 31.5 gets M1, A1.
(b) 45 (years)	B1	B0 for 60 – 15 only
(c) Sum of the amounts (276) Sum/8 34.5 (years)	M1 M1 A1	For attempt to add all the numbers For dividing a number in the range 216 – 336 by 8. C.A.O.
(d) Because 31 is less than 34.5 the mean will decrease OR because the new member is younger than the mean age the mean will decrease.	E2	Consider their reason then consider their conclusion. F.T. their mean in part (c) if M1 was awarded E1 for a valid reason or calculating the new mean as $307/9 = 34.1$, without a conclusion in their table or in their explanation E0 for 'because you are dividing by a larger number (9)'
12. (a) 950×2.12 = 2014 (BND)	M1 A1	BND not needed. Do not penalise \$ but A0 for £ or euros
12.(b) $180/2.12$ = (£)84.9(0) OR (£)84.91	M1 A1	Accept (£)85(.00) Accept unrounded correct answers 84.90(566) £ not needed but A0 for BND OR \$ OR euros.
13. <u>Carpet Tiles</u> (Area of a tile = $0.5 \times 0.5 = 0.25(\text{m}^2)$ OR $(10 \times 4) = 40(\text{m}^2)$ OR $(50 \times 50(\text{cm}^2) = 2500$ OR $(1000 \times 400 =) 400000(\text{cm}^2)$ (Number of tiles = $40 \div 0.25 = 160$ OR $(0.25 \times 32) = 8$ (Number of boxes = $160/32 = 5$ OR $(40 \div 8 =) 5$ (Cost = $5 \times £40 =$) (£) 200 <u>Wood Strips</u> (No of strips in the 10 by 4 = $40 \times 2 =$) 80 (Number of packs = $80/8 =$) 10 (packs) (Cost = $10 \times (£)22 =$) (£)220 Carpet tiles cheaper (by £20)	✓ B1 B1 B1 B1 B1 B1 B1 E1	OR $(10 \div 0.5 =) 20$ AND $(4 \div 0.5 =) 8$ F.T. $40 \div$ 'their 0.25' OR 'their 20' $\times$ 'their 8' F.T. 'their 160'/32 F.T. 'their 5' $\times$ (£) 40, provided number of boxes is a whole number $\neq 1$ OR 32. OR $(40 \div (2 \times 0.25) = 40 \div 0.5 =)$ 80 (OR $5 \times 16 =$) 80 F.T. 'their 80'/8 F.T. 'their 10' $\times$ (£)22, provided number of packs is a whole number $\neq 1$ OR 8. Conclusion on their figures if at least B1 awarded for 'carpet tiles' AND for 'wood strips'.
14.(a) $30 - x = 44 \div 2$ or $60 - 2x = 44$ $30 - x = 22$ or $-2x = 44 - 60$ or $60 - 44 = 2x$ or $-x = -8$ or $16 = 2x$ $x = 8$	B1 B1 B1	FT until 2 nd error FT equivalent level of difficulty Accept an embedded answer for B3 Note: Writing $2x = -16$ or $-2x = 16$ leading to $x = -8$ is generally from 1 error. Sight of $2x = 44 - 60$ is regarded as 1 error $60 - x = 44$ leading to $x = 16$ is awarded B0, B1, B0 (as level of difficulty is eased)
14. (b) $8a - 14c$	B2	B1 for any TWO correct terms from $12a - 6c - 4a - 8c$ OR B1 for $8a$ OR B1 for $-14c$
14. (c) 2, 3, 4, 5	B3	B1 for the 2, B1 for the 5 AND NO 6 or above, B1 for the 3 and 4 AND NO incorrect numbers, but allow 6 here. SC1 for $5/3 \leq n < 6$ (not 18/3)
15.(a) Reason to include, without contradiction..... - FreeFlight: fewest complaints - Best2Fly: fewest lost suitcases - GoJet: best arrival on time record	B2	B1 for any 2 correct responses Allow, if respectively, 'complaints', 'suitcases' or 'arrival time' is mentioned uniquely or if mentioned as the positive feature.

2015 Summer Linear Paper 2 (Calculator allowed) Foundation Tier	Marks	Comments															
15.(b) $30000 - 0.88 \times 30000$ OR 0.12×30000 3600 (flights late)	M1 A1	Accept $(1 - 0.88) \times 30000$ <i>If the incorrect airline is selected, award SC1 for either Freeflight or $0.15 \times 30000 = 4500$ (flights late), or GoJet or $0.08 \times 30000 = 2400$ (flights late) Do not accept these as unlabelled unsupported answers; need sight of workings or the airline name as sufficient identification</i>															
15.(c) Use of 0.36 and 0.42 (per 1000 compared) $500 \times (0.42 - 0.36)$ OR 500×0.06 OR $500 \times 0.42 - 500 \times 0.36$ or equivalent 30 (suitcases)	B1 M1 A1	Use of (0.)36 and (0.)42 in any calculation(s), or sight of 0.06 OR 6%. Ignore consistent place value errors for '500 thousand passengers', e.g. 21(00) – 18(00) C.A.O. I.S.W. <i>If no marks and no working allow SC1 for an answer of 3 or 300 or 3000 or 30000 GoJet and FreeFlight are mentioned twice in the question, hence no MR or SC marks awarded for use of the incorrect airlines</i>															
15.(d) 8(%)	B1	Do not accept 8/100 or 0.08. I.S.W. conversion to fractions or decimals. The answer must be a percentage															
16. SCROLL DOWN FOR SECOND PAGE (Length common side BD is) $3900 \div 75$ (BD =) 52 (cm) (Area of triangle BDC =) $\frac{1}{2} \times 25 \times BD$ (=) 650 (cm ²) (BC ² =) $25^2 + BD^2$ (BC =) $\sqrt{3329}$ or $BC^2 = 3329$ (BC =) 57.697...(cm) rounded or truncated	M1 A1 M1 A1 M1 A1 A1	<i>Check the diagram for any answers</i> FT 'their BD', including BD as 25(cm) or spurious BD FT 'their BD' provided both previous M marks awarded FT 'their BD', including BD as 25(cm) or spurious BD FT 'their BD' provided $\neq 25$ (cm) and it is not a spurious BD CAO. Do not accept 60 (cm) unless 57(.697...) seen <i>Alternative for the first 4 marks:</i> Base of triangle = $\frac{1}{3} \times \text{base rectangle}$ B1 Area of the triangle = $\frac{1}{3} \times \frac{1}{2} \times 3900$ M1 = 650 (cm ²) A2 <i>Alternative for the final 3 marks:</i> Complete method, all stages required to find BC M1 Intermediate stages answer correct A1 Final answer correct A1															
17.(a) Explanation, e.g. 'this information was not recorded', 'don't know how many peaches are in the other boxes', 'don't know if boxes have fewer than 8 peaches', 'doesn't show more or less than 8', 'could be fewer than 8 peaches', 'not all boxes may (or will) have 8 peaches'	E1	Do not accept, e.g. 'because some boxes only had 7 peaches', 'because they should contain exactly 8 peaches (not at least 8)' (given in the question), 'because 2/5 of the boxes are under 8'															
17.(b)(i) <table><tr><td>(8)</td><td>(18)</td><td>(25)</td><td>(32)</td><td>(41)</td></tr><tr><td>(10)</td><td>(20)</td><td>(30)</td><td>40</td><td>50</td></tr><tr><td>(0.80)</td><td>0.9(0)</td><td>0.83</td><td>0.8(0)</td><td>0.82</td></tr></table>	(8)	(18)	(25)	(32)	(41)	(10)	(20)	(30)	40	50	(0.80)	0.9(0)	0.83	0.8(0)	0.82	B2	Must be to appropriate 2dp, although allow 0.9 and 0.8 for 0.90 and 0.80 respectively B1 for any 4 or 5 correct entries
(8)	(18)	(25)	(32)	(41)													
(10)	(20)	(30)	40	50													
(0.80)	0.9(0)	0.83	0.8(0)	0.82													
17.(b)(ii) Uniform scale on the vertical axis, suitable for values of relative frequency Correct plots (allow joined or not joined)	M1 A1	Allow not starting at 0, but must be uniform from their first marked value. Do not accept inappropriate scales, the maximum value on the top of the vertical scale must not exceed 2.5, unless clearly working with percentage FT from (i) if possible provided all relative frequencies <1, or shown as percentages and they are not all identical. Tolerance of plotting is within the appropriate small square <i>Ignore any 'line of best fit drawn' or additional bars</i>															
17.(b)(iii) 0.82 or equivalent probability	B1	FT from their final decimal in the table in (b)(i) and provided it is <1 Do not accept 0.82% unless a correct equivalent to 0.82 is also seen															