PINPOINT REVISION PACKS

30_to_53_Percent_Pinpoint_AI_Pack

Time Allocation = 80mins , Max = 71 Marks

Calculated Grade Boundaries:

Grade	Marks
1-	18
1	36
1+	54
2-	71

Question 1 (AO1): (No Calc) 66% of students got this right (4 marks)

13 The table shows information about the favourite instrument played by each of 24 students.

Instrument	Number of boys	Number of girls
guitar	6	2
violin	2	5
keyboard	3	2
recorder	1	3

(*a*) On the grid below, draw a suitable diagram to show this information.



Question 2 (AO1): 66% of students got this right (2 marks)

11 (d) Solve $9m - 12 = 69$

m = ...

(2)

(Total for Question 11 is 6 marks)

Question 3 (AO3): (No Calc) 64% of students got this right (3 marks)

7 Fahima buys

2 packets of bread rolls costing £1.50 for each packet
1 bottle of ketchup costing £1.60
3 packets of sausages

Fahima pays with a £10 note.
She gets 30p change.

Fahima works out that one packet of sausages costs £2.30.

Is Fahima right?
You must show how you get your answer.

(Total for Question 7 is 3 marks)

Question 4 (AO3): (No Calc) 64% of students got this right (3 marks)

7. On Monday Alex earned £120
On Tuesday she earned £100

Alex earned the same amount of money on Wednesday, on Thursday and on Friday.

She earned a total of £550 for these five days.

(b) How much did Alex earn on Wednesday?

£ .....

(3)

(Total for Question 7 is 5 marks)

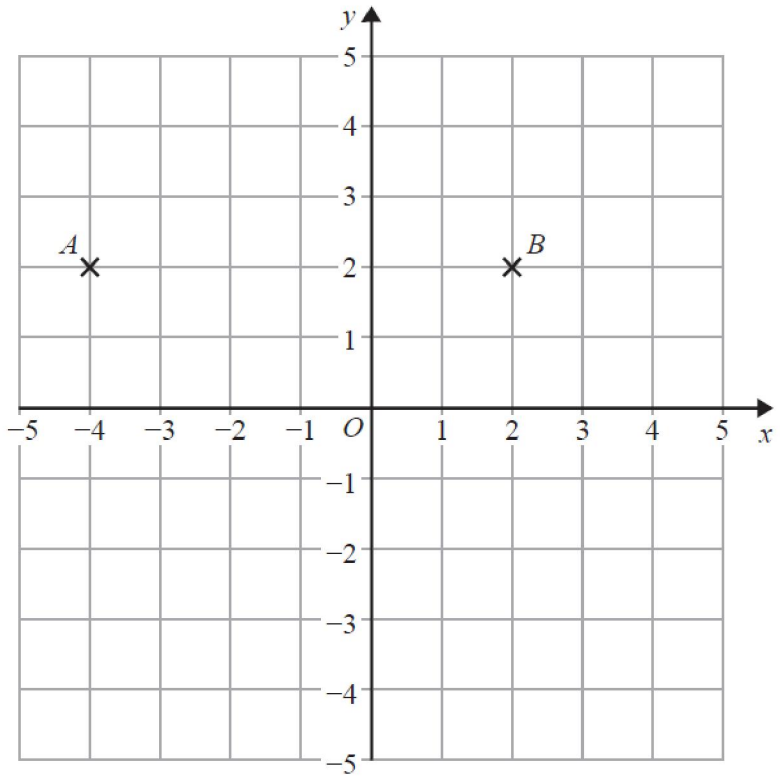
Question 5 (AO1): (No Calc) 64% of students got this right (1 marks)

1 (*b*) Write the following numbers in order of size.
Start with the smallest number.

1.073 1.37 1.307 1.703

Question 6 (AO1): 63% of students got this right (1 marks)

5b



(b) Write down the coordinates of the midpoint of AB.

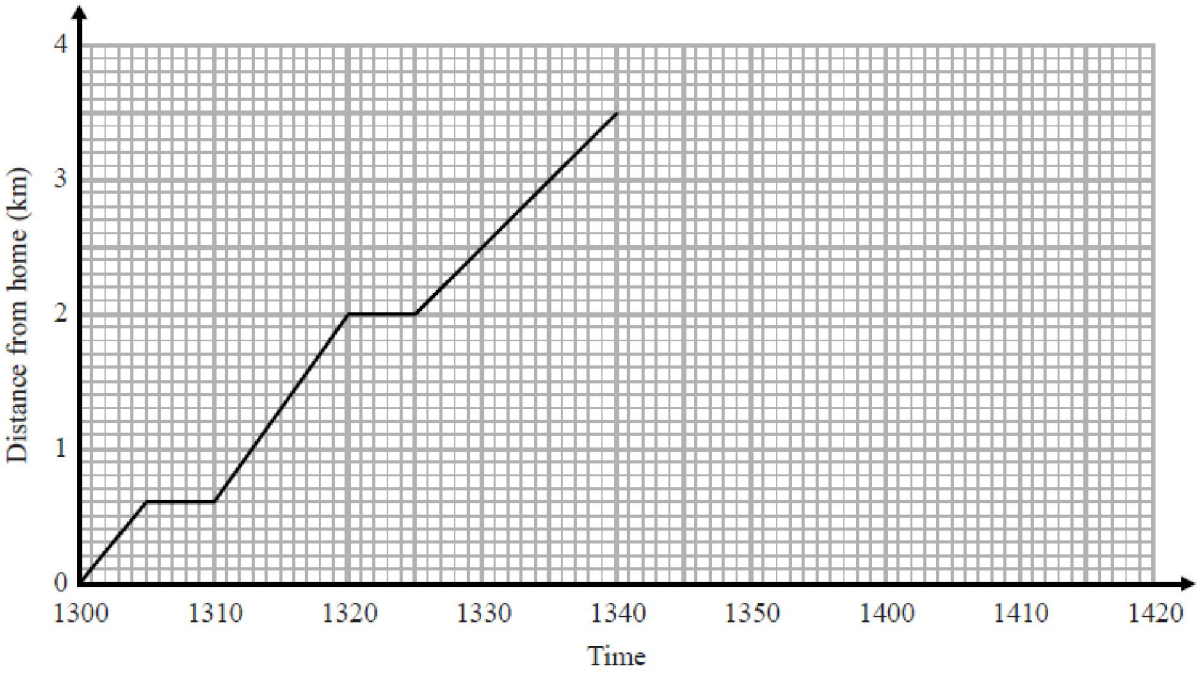
(..... , ...)

(1)

(Total for Question 5 is 2 marks)

Question 7 (AO1): (No Calc) 63% of students got this right (6 marks)

11. Arshad delivers parcels on his bike.
He starts from his home.
Here is the travel graph for the first 40 minutes of Arshad's journey.



(a) What time did Arshad start his journey?

.....
(1)

Arshad had to stop to deliver each parcel.

(b) How long, in minutes, did his first stop take?

..... minutes
(1)

(c) What is the distance between the two stops shown on the travel graph?

..... km
(2)

At 1340, Arshad stopped for 10 minutes to deliver his last parcel.
He then cycled home at a steady speed.
Arshad got home at 1415

(d) Complete the travel graph to show this information.

(2)

(Total for Question 11 is 6 marks)

Question 8 (AO1): 63% of students got this right (2 marks)

5 Work out $2017 - 986 + 125$

[2 marks]

Answer _____

Question 9 (AO1): (No Calc) 62% of students got this right (2 marks)

12 There are only 7 blue pens, 4 green pens and 6 red pens in a box.

One pen is taken at random from the box.

Write down the probability that this pen is blue.

.....

(Total for Question 12 is 2 marks)

Question 10 (AO1): (No Calc) 62% of students got this right (1 marks)

2 Work out $2 + 7 \times 10$

Question 11 (AO1): 60% of students got this right (2 marks)

11 (b) Simplify $3q + 3r - 3q + 3r$

.....

(2)

Question 12 (AO1): 60% of students got this right (1 marks)

11 (c) Expand $7(3n - 4)$

.....

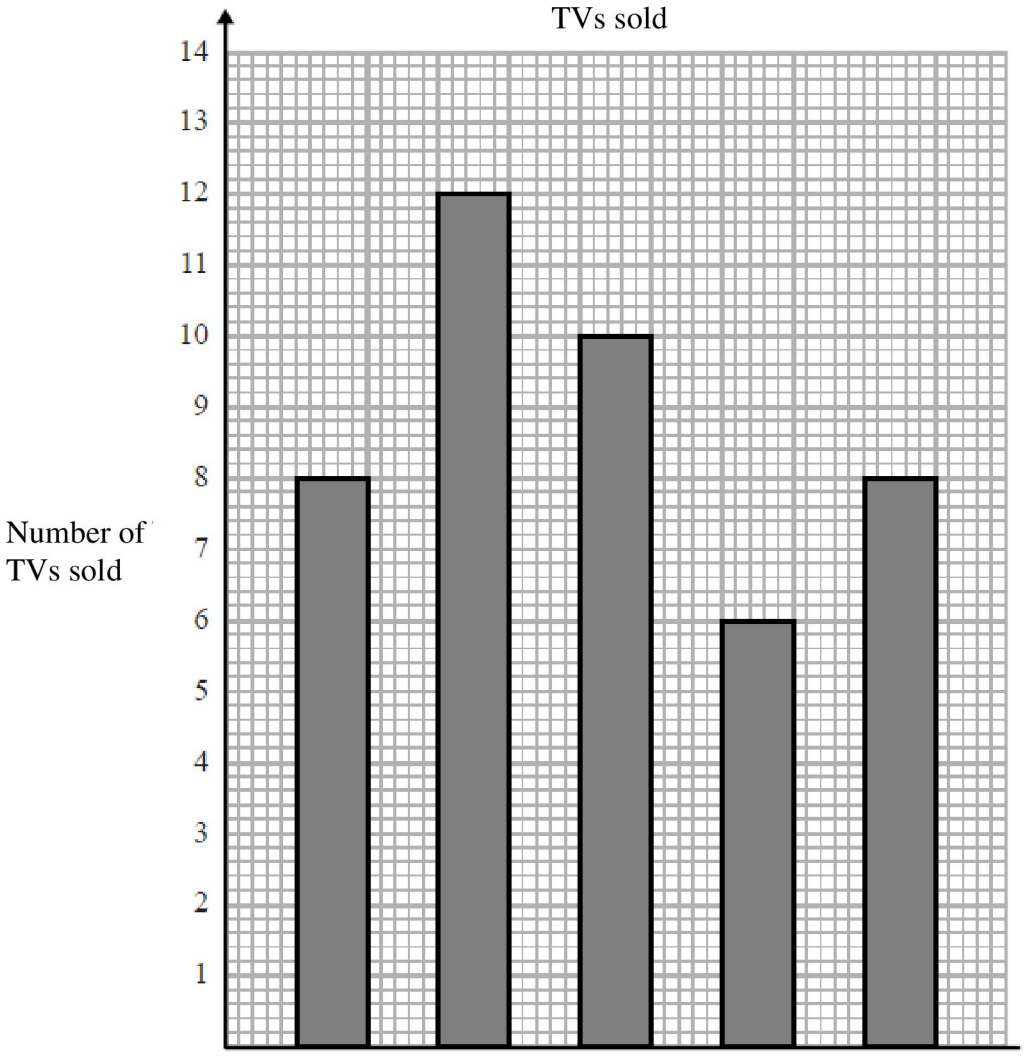
(1)

Question 13 (AO2): (No Calc) 59% of students got this right (3 marks)

6. The table shows the number of TVs sold in a shop on each of five days.

Day	Mon	Tue	Wed	Thu	Fri
Number of TVs sold	8	12	9	6	8

David uses this information to draw the graph below.



Write down **three** things wrong with this graph.

1 .....

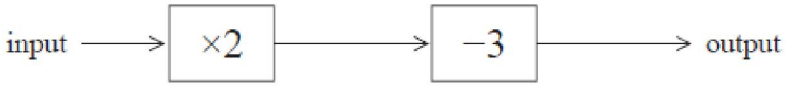
2 .....

3 .....

(Total for Question 6 is 3 marks)

Question 14 (AO2): (No Calc) 58% of students got this right (5 marks)

10. Here is a number machine.



(a) What is the **output** when the input is 4?

.....

(1)

(b) What is the **input** when the output is 11?

.....

(2)

(c) Show that there is an input for the machine for which the output is the same as the input.

(2)

(Total for Question 10 is 5 marks)

Question 15 (AO1): (No Calc) 58% of students got this right (1 marks)

12 Emma has 45 rabbits.

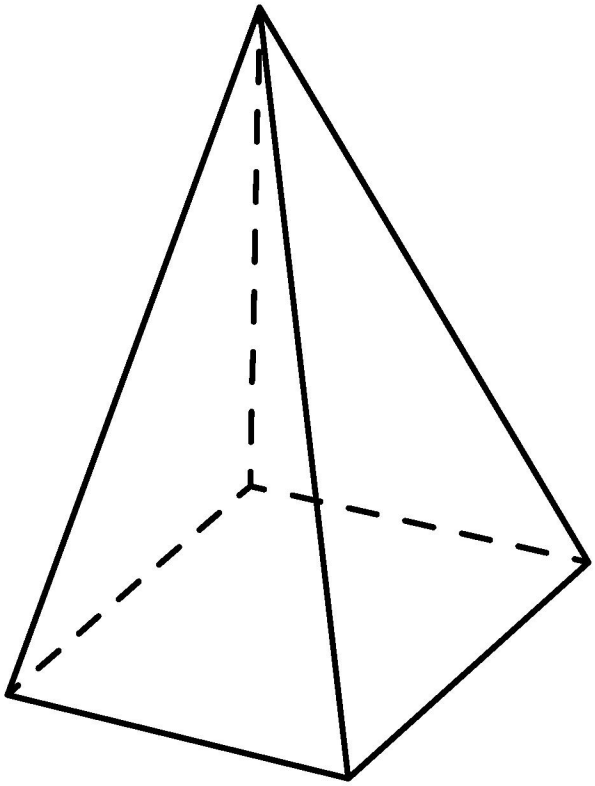
30 of the rabbits are male.
8 of the female rabbits have short hair.
12 of the rabbits with long hair are male.

One of Emma's rabbits is chosen at random.

(*b*) Write down the probability that this rabbit is a female with short hair.

Question 16 (AO1): (No Calc) 57% of students got this right (1 marks)

11 Here is a square-based pyramid.

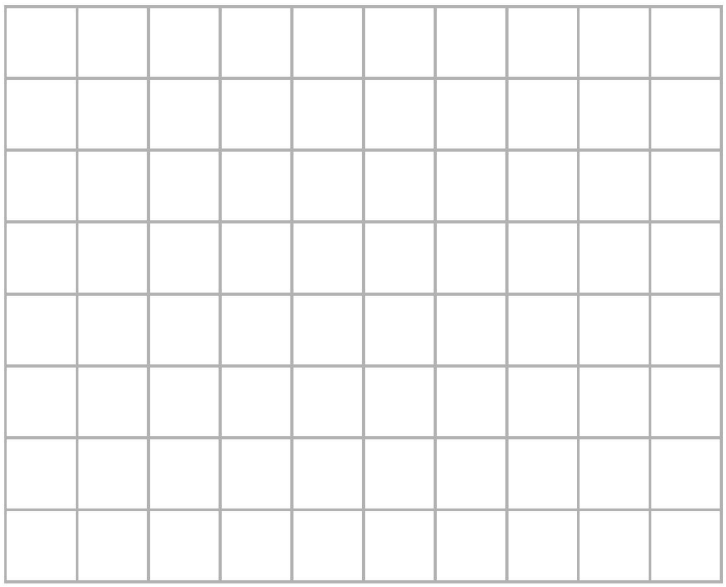


(*b*) Write down the number of edges.

Question 17 (AO2): (No Calc) 57% of students got this right (2 marks)

8 The length of a rectangle is twice as long as the width of the rectangle.
The area of the rectangle is 32 cm^2.

Draw the rectangle on the centimetre grid.



Question 18 (AO2): (No Calc) 56% of students got this right (1 marks)

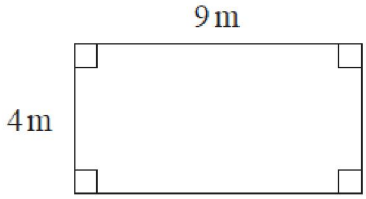
16 Berenika wants to buy 35 T-shirts.

Each T-shirt costs £5.80.
Berenika does the calculation $40 \times 6 = 240$ to estimate the cost of 35 T-shirts.

(*a*) Explain how Berenika's calculation shows the actual cost will be less than £240.

Question 19 (AO2): (No Calc) 56% of students got this right (4 marks)

9. Shirley has a garage.
Here is a plan of her garage floor.



Shirley wants to buy enough paint to cover the garage floor as cheaply as possible.
She can buy her paint from Decor U or from Paint Store.

Decor U	**Paint Store**
Floor paint	Floor paint
£3.70 each tin	£3.00 each tin
1 tin covers 12 m^2	1 tin covers 10 m^2

From which of these two shops should Shirley buy her paint?
You must show all your working.

(Total for Question 9 is 4 marks)

Question 20 (AO2): (No Calc) 55% of students got this right (3 marks)

15 There are 360 golf balls in a bucket.
There are

60 yellow golf balls
50 orange golf balls
40 pink golf balls

The rest of the golf balls are white.

What fraction of the golf balls are white?
Give your fraction in its simplest form.

Question 21 (AO1): (No Calc) 54% of students got this right (2 marks)

13 The table shows information about the favourite instrument played by each of 24 students.

Instrument	Number of boys	Number of girls
guitar	6	2
violin	2	5
keyboard	3	2
recorder	1	3

One of the students is chosen at random.

(*b*) What is the probability that this student's favourite instrument is **not** the recorder?

Question 22 (AO1): (No Calc) 54% of students got this right (1 marks)

4 Write $\frac{4}{5}$ as a percentage.

.....%

(Total for Question 4 is 1 mark)

Question 23 (AO1): (No Calc) 53% of students got this right (2 marks)

10

There are only 3 buttons in a box.
There is

1 pink button
1 yellow button
1 brown button

Indre takes a button from the box.
She also throws an ordinary dice once.

(*b*) List all the possible outcomes.

Question 24 (AO2): (No Calc) 52% of students got this right (1 marks)

10 Jake and Sarah each played a computer game six times.

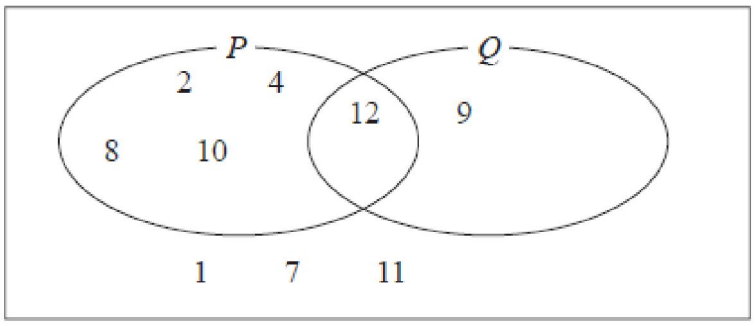
Their scores for each game are shown below.

Jake	10	9	8	11	12	8
Sarah	2	10	7	14	4	10

(*a*) Who had the most consistent scores, Jake or Sarah?
You must give a reason for your answer.

Question 25 (AO1): (No Calc) 52% of students got this right (4 marks)

17. The numbers 1, 2, 4, 7, 8, 9, 10, 11 and 12 are put into a Venn diagram.



The number 3 is in set Q but not in set P.
The number 6 is in both set P and set Q.

(a) Complete the Venn diagram.

(2)

A student chooses at random a number in the completed Venn diagram.

(b) Write down the probability that this number is **not** in Set Q.

.....

(2)

(Total for Question 17 is 4 marks)

Question 26 (AO1): (No Calc) 51% of students got this right (2 marks)

18 Harry, Regan and Kelan share £450 in the ratio 2 : 5 : 3

How much money does Kelan get?

Question 27 (AO1): (No Calc) 51% of students got this right (1 marks)

3 Write 0.09 as a fraction.

Question 28 (AO1): (No Calc) 50% of students got this right (1 marks)

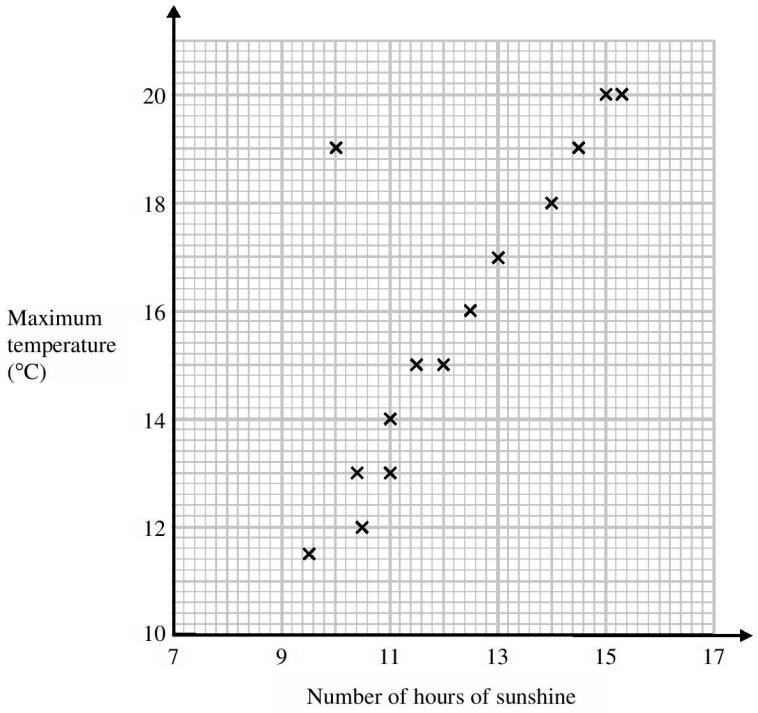
2 Write 7.264 51 correct to 3 decimal places.

.....

(Total for Question 2 is 1 mark)

Question 29 (AO1): (No Calc) 50% of students got this right (5 marks)

21 The scatter graph shows the maximum temperature and the number of hours of sunshine in fourteen British towns on one day.



One of the points is an outlier.

(*a*) Write down the coordinates of this point.

(..... , ...)

(1)

(*b*) For all the other points write down the type of correlation.

.....

(1)

On the same day, in another British town, the maximum temperature was 16.4 °C.

(*c*) Estimate the number of hours of sunshine in this town on this day.

..... hours

(2)

A weatherman says,

"Temperatures are higher on days when there is more sunshine."

(*d*) Does the scatter graph support what the weatherman says?
Give a reason for your answer.

.....

.....

(1)

(Total for Question 21 is 5 marks)

Question 30 (AO2): (No Calc) 47% of students got this right (1 marks)

10 Jake played a different game 20 times.

The stem and leaf diagram shows information about his scores.

0	9
1	2 3 3 4 5
2	5 6 6 6 6 7
3	1 3 4 6 8
4	0 2 9

Key
1 | 2 represents 12 points

Jake said his modal score was 6 points because 6 occurs most often in the diagram.

(*b*) Is Jake correct?
You must explain your answer.

Question 31 (AO1): (No Calc) 47% of students got this right (3 marks)

19 Here is a list of ingredients for making 16 flapjacks.

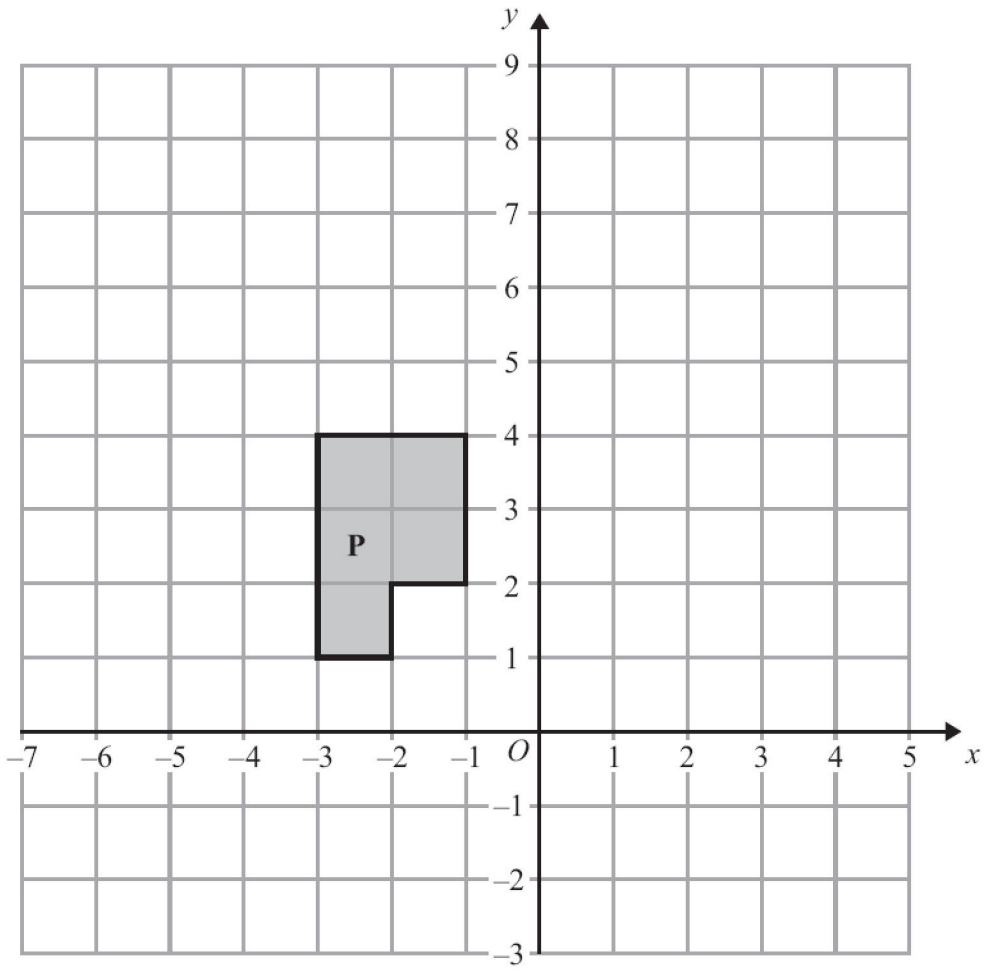
Ingredients for 16 flapjacks
120 g butter 140 g brown sugar 250 g oats 2 tablespoons syrup

Jenny wants to make 24 flapjacks.

Work out how much of each of the ingredients she needs.

Ext Qn1 (AO1): (No Calc) Only 39% of students got this right(2 mark

21.



(a) Translate shape P by the vector $\begin{pmatrix} 5 \\ -2 \end{pmatrix}$.

Ext Qn2 (AO1): Only 39% of students got this right(2 marks)

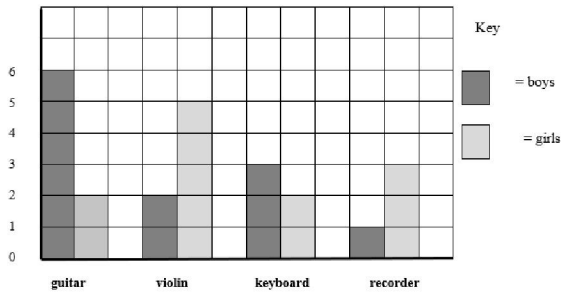
23 Write 36 as a product of its prime factors.

Ext Qn3 (AO3): (No Calc) Only 38% of students got this right(3 mark

17. One kilogram of cheese costs £5.60.
Jane buys 200 g of cheese.

Work out how much Jane pays.

Answers to Qn 1 (AO1): (No Calc) 66% of students got this right

Question	Working	Answer	Mark	Notes
13 (a)	Diagram drawn 		C1 C1 C1 C1	for a key or suitable labels to identify boys and girls for a diagram or chart set up for comparison for correct heights for at least 4 bars dependent on a linear scale for a fully correct diagram

Answers to Qn 2 (AO1): 66% of students got this right

11 (d) Solve $9m - 12 = 69$

$9m = 69 + 12$

$9m = 81$

$m = 9$

Answers to Qn 3 (AO3): (No Calc) 64% of students got this right

Question 7 (Total 3 marks)

Part	Working or answer an examiner might expect to see	Mark	Notes
	£10 – 30p − £1.60 – (2 × £1.50) = £5.10	P1	This mark is given for a process to find money spent on 3 packets of sausages
	£5.10 ÷ 3	P1	This mark is given for a process to find the cost of one packet of sausages
	Fahama is wrong, a packet of sausages costs £1.70	C1	This mark is given for a correct conclusion with supporting working

Answers to Qn 4 (AO3): (No Calc) 64% of students got this right

7 (b)		110	M1 M1 A1	for method to find total for last 3 days, e.g. 550 − (120+100) (=330) shows the need to find the amount for one day (e.g. ÷3) cao

Answers to Qn 5 (AO1): (No Calc) 64% of students got this right

Question	Working	Answer	Mark	Notes
1 (b)		1.073 1.307 1.37 1.703	B1	Cao

Answers to Qn 6 (AO1): 63% of students got this right

5 (b) Write down the coordinates of the midpoint of AB.

A (-4, 2)

B (2, 2)

$\left(\frac{-4+2}{2}, \frac{2+2}{2}\right)$

(-1, 2)

Answers to Qn 7 (AO1): (No Calc) 63% of students got this right

11	(a)		1300	B1	cao
	(b)		4 - 5	B1	
	(c)		1.4	M1	for taking readings from graph, e.g. 0.6 or 2 or finds the difference from their readings
				A1	cao
	(d)		graph	B1	for showing a horizontal line from (13 40, 3.5) to (13 50, 3.5)
				B1	for a line that terminates at (14 15,0) and starts from (13 50, 3.5) or starts from the end of their graph so far, e.g. from (13 40, 3.5)

Answers to Qn 8 (AO1): 63% of students got this right

5 Work out $2017 - 986 + 125$

1031+ 125

1156

Answer 1156

Answers to Qn 9 (AO1): (No Calc) 62% of students got this right

Question 12 (Total 2 marks)

Part	Working or answer an examiner might expect to see	Mark	Notes
	$\frac{a}{17}$ where $a \neq 7$ and < 17 or $\frac{7}{b}$ where $b \neq 17$ and > 7	M1	This mark is given for a method to start finding the probability with a correct numerator or denominator
	$\frac{7}{17}$	A1	This mark is given for the correct answer only

Answers to Qn 10 (AO1): (No Calc) 62% of students got this right

Part	Working or answer an examiner might expect to see	Mark	Notes
2	$2 + (7 \times 10) = 72$	1	This mark is given for the correct answer only

Answers to Qn 11 (AO1): 60% of students got this right

11 (b) Simplify $3q + 3r - 3q + 3r$

$3q - 3q = 0$

$3r + 3r = 6r$

$6r$

Answers to Qn 12 (AO1): 60% of students got this right

11 (c) Expand $7(3n - 4)$

$7.3n - 7(4)$

$21n - 28$

Answers to Qn 13 (AO2): (No Calc) 59% of students got this right

6		statement	C1	eg no labels on horizontal axis
		statement	C1	eg no 0 on vertical axis
		statement	C1	eg middle column incorrect height

Answers to Qn 14 (AO2): (No Calc) 58% of students got this right

10	(a)		5	B1	cao
	(b)		7	M1	starts to find number using inverse operations (oe), e.g. use of ÷2 or +3
				A1	cao
	(c)		3	M1	starts to find the number by using inverse operations with own values or algebraic expressions, e.g. use of ÷2 and +3; e.g. $2x - 3$
				A1	cao

Answers to Qn 15 (AO1): (No Calc) 58% of students got this right

Part	Working or answer an examiner might expect to see	Mark	Notes
12 (b)	$\frac{8}{45}$	1	This mark is given for the answer shown (or an alternative value, e.g. 1.77777…)

Answers to Qn 16 (AO1): (No Calc) 57% of students got this right

Question	Working	Answer	Mark	Notes
11 (b)		8	B1	cao

Answers to Qn 17 (AO2): (No Calc) 57% of students got this right

Part	Working or answer an examiner might expect to see	Mark	Notes
8		1	This mark is given for any rectangle drawn where the length is twice the width
	4×8 rectangle correctly drawn	1	This mark is given for the correct answer only

Answers to Qn 18 (AO2): (No Calc) 56% of students got this right

Part	Working or answer an examiner might expect to see	Mark	Notes
16 (a)	Both values given are overestimates, so the actual cost will be less than £240	1	This mark is given for a correct explanation

Answers to Qn 19 (AO2): (No Calc) 56% of students got this right

9		Decor U	P1	for process to find an area as a first step, e.g. 4×9 (=36)
			P1	(dep P1) for process to find the number of tins for one store, e.g. 36 ÷ 12 (3 tins) or 36 ÷ 10 (4 tins)
			P1	for process to find the costs for both, e.g. "3" × £3.70 and "4" × £3 where the number of tins ("3" or "4") is an integer
			A1	States Decor U and giving costs as 11.10 and 12

Answers to Qn 20 (AO2): (No Calc) 55% of students got this right

Question	Working	Answer	Mark	Notes
15		$\frac{7}{12}$	M1	for 40 + 50 + 60 (= 150) or 360 – 40 – 50 – 60 (= 210)
			M1	for $1 - \frac{"150"}{360}$ $\left(=\frac{210}{360}\right)$ or $\frac{"210"}{360}$
			A1	for $\frac{7}{12}$

Answers to Qn 21 (AO1): (No Calc) 54% of students got this right

Question	Working	Answer	Mark	Notes
13 (b)		$\frac{20}{24}$	M1	for $\frac{20}{a}$ oe, where $a > 20$ or ft their diagram or $\frac{b}{24}$ oe, where $0 < b < 24$ or ft their diagram
			A1	for $\frac{20}{24}$ oe or ft their diagram

Answers to Qn 22 (AO1): (No Calc) 54% of students got this right

Question 4 (Total 1 mark)

Part	Working an or answer examiner might expect to see	Mark	Notes
	$\frac{4}{5} = 0.8 = 80\%$	B1	This mark is given for the correct answer only

Answers to Qn 23 (AO1): (No Calc) 53% of students got this right

Question	Working	Answer	Mark	Notes
10 (b)		P1 P2 P3 P4 P5 P6 Y1 Y2 Y3 Y4 Y5 Y6 B1 B2 B3 B4 B5 B6	B2	for complete list of 18 outcomes with no repeats
			[B1]	[for at least 9 correct outcomes with no more than one incorrect, repeats accepted]

Answers to Qn 24 (AO2): (No Calc) 52% of students got this right

Part	Working or answer an examiner might expect to see	Mark	Notes
10 (a)	Jake; range of marks is smaller than Sarah's	1	This mark is given for a correct explanation referring to spread, range or highest and lowest values

Answers to Qn 25 (AO1): (No Calc) 52% of students got this right

17 (a)		3 in Q	B1	the figure 3 is correctly placed
		6 in middle	B1	the figure 6 is correctly placed
(b)		$\frac{7}{11}$	M1	for writing $7/a$ ($a \neq 11$, $a > 7$) or $b/11$ ($b \neq 7$, $b < 11$) (ft)
			A1	for 7/11 (cao or ft from their Venn diagram) oe

Answers to Qn 26 (AO1): (No Calc) 51% of students got this right

Part	Working or answer an examiner might expect to see	Mark	Notes
18	$450 \div (2 + 5 + 3) = 45$	1	This mark is given for a process to find how many parts the amount should be divided into
	$3 \times 45 = 135$	1	This mark is given for the correct answer only

Answers to Qn 27 (AO1): (No Calc) 51% of students got this right

Question	Working	Answer	Mark	Notes
3		$\frac{9}{100}$	B1	

Answers to Qn 28 (AO1): (No Calc) 50% of students got this right

Question 2 (Total 1 mark)

Part	Working or answer an examiner might expect to see	Mark	Notes
	7.265	B1	This mark is given for the correct answer only

Answers to Qn 29 (AO1): (No Calc) 50% of students got this right

Question 21 (Total 5 marks)

Part	Working or answer an examiner might expect to see	Mark	Notes
(a)	(10, 19)	B1	This mark is given for the correct answer only
(b)	Positive (correlation)	C1	This mark is given for a correct comment
(c)	Line drawn from 16.4 up to (16.4, *y*)	M1	This mark is given for an appropriate line of best fit drawn, or a point marked at (16.4, *y*) or a vertical line
	Answer in the range 12 – 13	A1	This mark is given for an answer of hours in the range 12 to 13
(d)	Yes, the graph appears to justify this since the majority of points for high temperature appear when there are more hours of sunshine (positive correlation)	C1	This mark is given for a correct explanation

Answers to Qn 30 (AO2): (No Calc) 47% of students got this right

Part	Working or answer an examiner might expect to see	Mark	Notes
10 (b)	No, since stem not used – it should be 26	1	This mark is given for a correct explanation

Answers to Qn 31 (AO1): (No Calc) 47% of students got this right

Part	Working or answer an examiner might expect to see	Mark	Notes
19	$\frac{24}{16} = 1.5$	1	This mark is given for a process to find how much to multiply by
	120×1.5, 140×1.5, 250×1.5, 2×1.5	1	This mark is given for a method to scale up at least one ingredient
	180, 210, 375, 3	1	This mark is given for the four correct answers only

Ext ANSWERS 1 (AO1): (No Calc) Only 39% of students got this rigl

Question		Answer	Mark	Notes
21	(a)	Correct position	2	B2 for correct shape in correct position (B1 for any incorrect translation of correct shape)

Ext ANSWERS 2 (AO1): Only 39% of students got this right(2 mark

Part	Working or answer an examiner might expect to see	Mark	Notes
23	36 2, 18 2, 2, 9 2, 2, 3, 3	1	This mark is given for a complete method to find prime factors, which could be shown on a complete factor tree with no more than one arithmetic error
	$2 \times 2 \times 3 \times 3$	1	This mark is given for the correct answer only

Ext ANSWERS 3 (AO3): (No Calc) Only 38% of students got this rigl

Question		Answer	Mark	Notes
17		£1.12	3	M1 for use of 1000 g in 1 kg e.g. 1000 ÷ 200(=5) **;** 200 ÷ 1000(=0.2) oe **;** 20% **;** 500g costs £2.80 **;** 100g costs 56p M1(dep) for a fully correct method e.g. 5.60 ÷ "5" (= 1.12) **or** 56 × 2 A1 £1.12 or 112p