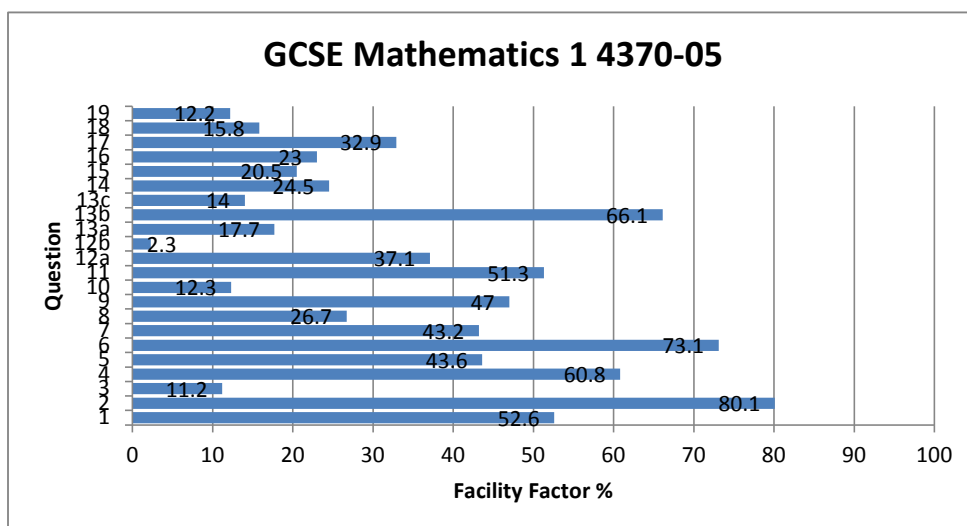


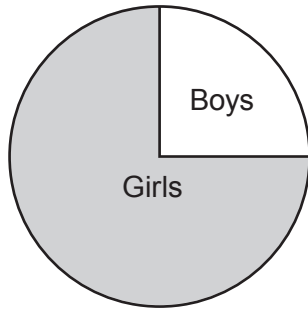
GCSE Mathematics 1 4370-05

All Candidates' performance across questions

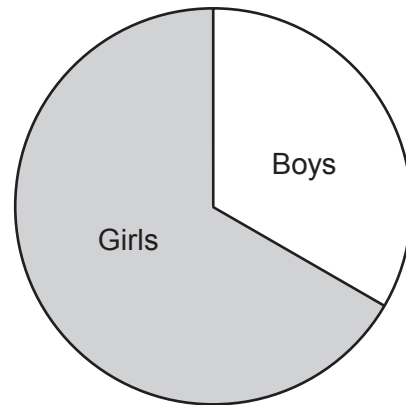
| Question Title | N | Mean | SD | Max Mark | FF | Attempt % |
|----------------|-------|------|-----|----------|------|-----------|
| 1 | 12186 | 3.7 | 1.8 | 7 | 52.6 | 99.7 |
| 2 | 12213 | 4.8 | 1.1 | 6 | 80.1 | 100 |
| 3 | 11559 | 0.4 | 0.8 | 4 | 11.2 | 94.6 |
| 4 | 11803 | 2.4 | 1.5 | 4 | 60.8 | 96.6 |
| 5 | 11906 | 1.7 | 1.5 | 4 | 43.6 | 97.5 |
| 6 | 12140 | 7.3 | 2.5 | 10 | 73.1 | 99.4 |
| 7 | 11789 | 1.3 | 1.3 | 3 | 43.2 | 96.5 |
| 8 | 10981 | 0.8 | 0.9 | 3 | 26.7 | 89.9 |
| 9 | 12099 | 3.8 | 2.1 | 8 | 47 | 99 |
| 10 | 9620 | 0.6 | 1.3 | 5 | 12.3 | 78.7 |
| 11 | 11163 | 2.6 | 2.1 | 5 | 51.3 | 91.4 |
| 12a | 10878 | 1.5 | 1.6 | 4 | 37.1 | 89 |
| 12b | 11085 | 0 | 0.2 | 2 | 2.3 | 90.7 |
| 13a | 10935 | 0.4 | 0.6 | 2 | 17.7 | 89.5 |
| 13b | 11210 | 0.7 | 0.5 | 1 | 66.1 | 91.8 |
| 13c | 10638 | 0.3 | 0.6 | 2 | 14 | 87.1 |
| 14 | 11748 | 1.2 | 1.3 | 5 | 24.5 | 96.2 |
| 15 | 10259 | 0.6 | 0.9 | 3 | 20.5 | 84 |
| 16 | 11413 | 1.6 | 1.7 | 7 | 23 | 93.4 |
| 17 | 10330 | 1.6 | 2 | 5 | 32.9 | 84.5 |
| 18 | 11805 | 0.9 | 1.5 | 6 | 15.8 | 96.6 |
| 19 | 11685 | 0.5 | 1.2 | 4 | 12.2 | 95.6 |



5. The pie charts show the proportion of boys to girls in class A and class B.



Class A



Class B

There are more pupils in class B than in class A.

There are 4 boys in class A.

There are $1\frac{1}{2}$ times as many girls in class B than in class A.

How many boys are there in class B?

[4]

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Question 5

Boys in class A = $\frac{1}{4}$ of class A,


$4 \times 3 = 12$, 12 girls in class A

$12 \times \frac{1}{2} = 6$ girls in class B.

$\frac{2}{3} \div 2 = \frac{1}{3}$. $18 \div 2 = 9$

There are 9 boys in class B.

Question 5

Boys in class A = $\frac{1}{4}$ of class A, 

$4 \times 3 = 12$, 12 girls in class A

$12 \times \frac{1}{2} = 18$ girls in class B.

$\frac{2}{3} \div 2 = \frac{1}{3}$. $18 \div 2 = 9$


There are 9 boys in class B.

Question 5



If a quarter of the boys = 4 in class A then $\frac{3}{4} = 12$.

$1.5 \times 12 = 18$
 $\frac{1}{3}$ of 18 = 6 There are 6 boys.

Question 5

If a quarter of the boys = 4 in class A then $\frac{3}{4} = 12$. 

$1.5 \times 12 = 18$ 

$\frac{1}{3}$ of 18 = 6  There are  6 boys.

9. Amelia regularly buys bird food to place on her bird table.



- (a) The winter mix bird food contains buckwheat, millet and sunflower seeds. For every 2g of buckwheat there are 3g of millet and 5g of sunflower seeds. How much millet is there in an 850g bag of winter mix bird food?

[2]

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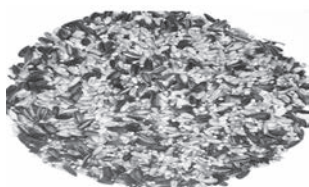
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- (b) *You will be assessed on the quality of your written communication in this part of the question.*

The summer mix bird food is sold in different sized bags. The sizes of the bags and the prices are shown below.



| Size | Price |
|------|-------|
| 250g | 49p |
| 300g | 54p |
| 4 kg | £7.60 |

Amelia bought exactly 5 kg of the summer mix bird food. She found the cheapest option for buying the bird food.

How much did Amelia pay for the bird food?
You must show how many bags of each size Amelia bought.
You must show all your working.

[6]



Question 9b

Firstly you ~~the~~ convert 5kg into grams which is 5000g and then divide it by 250g which is 20g. She bought 20 of the 250g bags. Next you multiply 49p by 20 grams which equals 980p, which converted into pounds is £9.80

So that means the price that Amelia had to pay for the bird food is £9.80.

Question 9b

Firstly you ~~the~~ convert 5kg into grams which is 5000g and then divide it by 250g which is 20. She bought 20 of the 250g bags. Next you multiply 49p by 20 grams which equals 980p, which converted into pounds is £9.80.

So that means the price that Amelia had to pay for the bird food is £9.80.

Question 9b

49

49 But she could also have

49 20 of the 49p 250g

249 bags which would ^{cost} ~~cost~~

£9.56 20 £9.80

4 0 8 0

9 8 0

4.8 0

Also she could have 15 300g

and 2 250g to make 5kg

and that would cost...

5 1 5

4 0 8 0

£8.10

+ 49 8.10

9.9 .98

£9.08

so overall she would be best

off getting 15 300g and 2 250g

that would cost 9.08 which

is the cheapest to buy.

Question 9b



49

49 But she could also have

49 20 of the 49p 250g

2439 bags which would ^{cost} ~~cost~~

£9.56



20
4 0 8 9 0
9 8 8 0
4.80

£9.80

Also she could have 15 300g
and 2 250g to make 5kg
and that would cost...

$$\begin{array}{r}
 15 \\
 5 \times 3.25 \\
 4 \times 2.50 \\
 \hline
 £8.10
 \end{array}
 +
 \begin{array}{r}
 49 \\
 9.8 \\
 \hline
 8.10 \\
 .98 \\
 \hline
 £9.08
 \end{array}$$

so overall she would be best
off getting 15 300g and 2 250g
that would cost 9.08 which
is the cheapest to buy.



Question 9b

Option 1: Amelia bought 1 4kg bag and 4 250g bags

$$£7.60 + (6.49 \times 4 = 1.96) = £9.56$$

Option 2: Amelia bought 20 250g bags

$$6.49 \times 20 = £12.98$$

Option 3: Amelia bought 15 300g bags and 2 250g bags

$$(\cancel{15} \times 0.54 = £8.10) + (6.49 \times 2 = £12.98) = £21.08$$

∴ Amelia bought 15 300g bags and 2 250g bags.

Question 9b

Option 1: Amelia bought 1 4kg bag and 4 250g bags

$$£7.60 + (6.49 \times 4 = 1.96) = £9.56$$

Option 2: Amelia bought 20 250g bags

$$6.49 \times 20 = £12.98$$

Option 3: Amelia bought 15 300g bags and 2 250g bags

$$(\cancel{15} \times 0.54 = £8.10) + (6.49 \times 2 = £12.98) = £21.08$$

∴ Amelia bought 15 300g bags and 2 250g bags.

13. (a) The diagram shows a semicircle joined to a square.

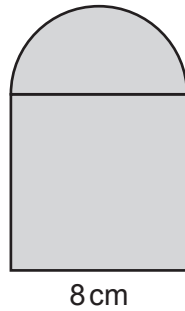


Diagram not drawn to scale

Calculate the total area of the shaded shape, leaving your answer in terms of π . [2]

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Question 13a

$$\cancel{3.14 \times 4^2 = 12.56}$$

$$3.14 \times 16 = 50.24$$

$$8 \times 8 = 64$$

$$112.56 \text{ cm}^2$$

$$\begin{array}{r} 50.24 \\ + 64.32 \\ \hline 112.56 \end{array}$$

Question 13a

$$3.14 \times 4^2 = 12.56$$

$$3.14 \times 16 = 50.24$$

$$8 \times 8 = 64$$



$$112.56 \text{ cm}^2$$

$$\begin{array}{r} 50.24 \\ + 64.00 \\ \hline 114.24 \end{array}$$



Question 13a

$$\text{Square} = 8 \times 8 = 64 \text{ cm}^2 \quad (b \times h)$$

$$\text{semicircle} = \pi r^2$$


$$\pi \times 8^2 = \frac{\pi 64}{2}$$

~~area = $\frac{\pi 64}{2} + 64$~~

$$\text{area} = \pi 32 + 64$$

$$\frac{\pi 64}{2} + 64$$

Question 13a





$$\text{Square} = 8 \times 8 = 64 \text{ cm}^2 \quad (b \times h)$$
$$\text{semicircle} = \pi r^2$$
$$\pi \times 8^2 = \frac{\pi 64}{2}$$

~~area = $\frac{\pi 64}{2} + 64$~~

$$\text{area} = \pi 32 + 64$$

$\frac{\pi 64}{2} + 64$





13.

(c) Evaluate $\frac{4.5 \times 10^8}{9 \times 10^{12}}$, giving your answer in standard form.

[2]

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Question 13 c

(c) Evaluate $\frac{4.5 \times 10^9}{9 \times 10^{12}}$, giving your answer in standard form.

$$0.5 \times 10^{-4}$$

Question 13 c

(c) Evaluate $\frac{4.5 \times 10^9}{9 \times 10^{12}}$, giving your answer in standard form.

0.5×10^{-4}



Question 13c

(c) Evaluate $\frac{4.5 \times 10^9}{9 \times 10^{12}}$, giving your answer in standard form. [2]

4500000000
9000000000000

0.2×10^{-4}

Question 13c

(c) Evaluate $\frac{4.5 \times 10^9}{9 \times 10^{12}}$, giving your answer in standard form. [2]

4500000000
9000000000000

0.2 $\times 10^{-4}$