WJEC 2014 Online Exam Review

GCSE Methods in Mathematics Unit 1 Foundation 4363-01

All Candidates' performance across questions

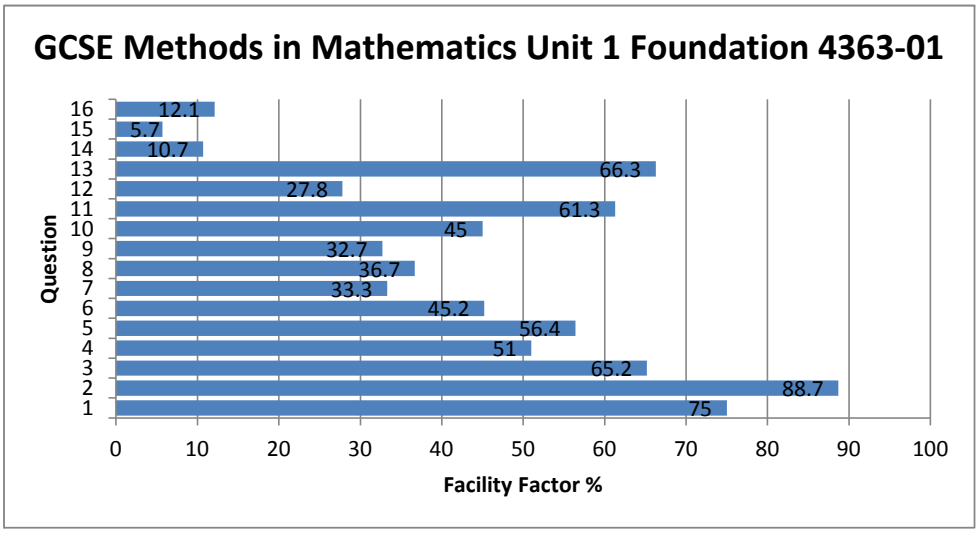
Question Title	N	Mean	S D	Max Mark	F F	Attempt %
1	399	6	1.7	8	75	100
2	399	3.5	1	4	88.7	100
3	392	2.6	1.2	4	65.2	98.3
4	398	4.1	2.3	8	51	99.8
5	393	3.4	2.2	6	56.4	98.5
6	398	2.7	1.6	6	45.2	99.8
7	389	1.7	1.6	5	33.3	97.5
8	341	1.5	1.7	4	36.7	85.5
9	393	2.9	1.9	9	32.7	98.5
10	394	1.8	1.4	4	45	98.8
11	388	2.5	1.2	4	61.3	97.2
12	383	1.1	1.1	4	27.8	96
13	388	2	1.1	3	66.3	97.2
14	313	0.4	0.8	4	10.7	78.5
15	329	0.2	0.6	3	5.7	82.5
16	369	0.5	1	4	12.1	92.5

3

5

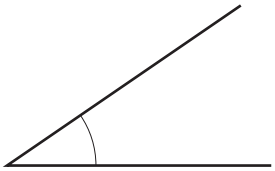
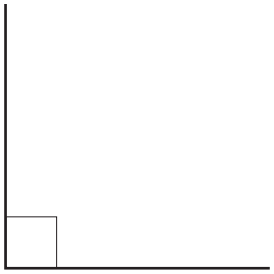
7

16



Examiner only

3. Complete the following table.
The first row has been done for you. [4]

Angle	Name of angle	Reason
	**Acute**	**The angle is between 0° and 90°**
		
		

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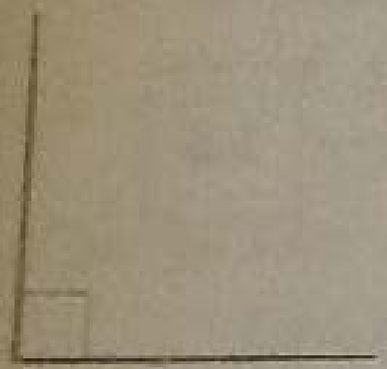
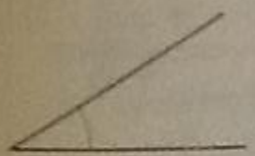
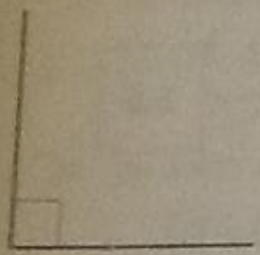
[4]

Angle	Name of angle	Reason
	Acute	The angle is between 0° and 90°
	Right angle.	90° angle.
	Reflex	The angle is between 90° and 180°

3. Complete the following table.
The first row has been done for you.

[4]

Angle	Name of angle	Reason
	Acute	The angle is between 0° and 90°
	Right angle	90° angle.
	Reflex	The angle is between 90° and 180°

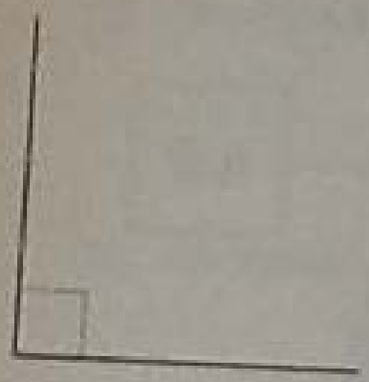
3

(3)

3. Complete the following table.
The first row has been done for you.

[4]

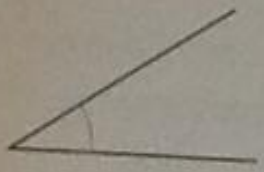
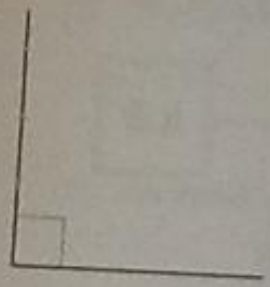
Examiner only

Angle	Name of angle	Reason
	Acute	The angle is between 0° and 90°
	Right angle	The angle is always 90°
	Obtuse	The angle is more than 90°

3. Complete the following table.
The first row has been done for you.

[4]

Examiner only

Angle	Name of angle	Reason
	Acute	The angle is between 0° and 90°
	Right angle ✓	The angle is always 90° ✓
	Obtuse ✓	The angle is more than 90°

B1
E1

B1
E0

3

Examiner only

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

Both *Len's Store* and *Deb's Store* sell the same moisturising lotion, in the same sized bottles.

Siwan needs to buy 12 bottles of moisturising lotion.
Which of the two stores has the better offer for Siwan?
You must show all your working. [6]

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

Both Len's Store and Deb's Store sell the same moisturising lotion, in the same sized bottles.

LEN'S STORE

Moisturising Lotion 90p

Buy three get 4th free

Deb's Store

Moisturising Lotion £1.00

Buy two get 3rd free

Siwan needs to buy 12 bottles of moisturising lotion.
Which of the two stores has the better offer for Siwan?
You must show all your working. [6]

Len's Store

$4\overline{)12}$ = 3 bottles free   12 − 3 = 9

0.90 × 9

8.10 = £8.10

Deb's Store

$3\overline{)12}$ = 4 bottles free   12 − 4 = 08

1.00 × 8 = 8.00 = £8.00

Deb's store is cheaper than Len's store on buying 12 bottles Moisturising Lotion Cream in Deb's store is £8.00 and in Len's store it is £8.10

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

Both Len's Store and Deb's Store sell the same moisturising lotion, in the same sized bottles.

Siwan needs to buy 12 bottles of moisturising lotion.
Which of the two stores has the better offer for Siwan?
You must show all your working

[6]

Len's Store

$4\overline{)12}$ = 3 bottles free $\quad 12 - 3 = 9$

0.90 × 9 = £8.10 - £8.10

Deb's Store

$3\overline{)12}$ = 4 bottles free $\quad 12 - 4 = 08$

1.00 × 8 = £8.00 = £8.00

Deb's store is cheaper as they get 12 bottles of moisturising lotion cheaper at Deb's store for £8.00 and at Len's

S1
M1
A1
A1
QWC
2
(6)

5

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

Both Len's Store and Deb's Store sell the same moisturising lotion, in the same sized bottles.

Siwan needs to buy 12 bottles of moisturising lotion.
Which of the two stores has the better offer for Siwan?
You must show all your working.

[6]

Lens

12 x 90 = £1080 ← working out for 12 bottles

90 3, 4, 6, 7, 9, 10, 11, 12 ← working out the offer

99 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12

108 9 x 90 = £810

Deb's

12 x 1·00 = £12·00 ← working out for 12 bottles

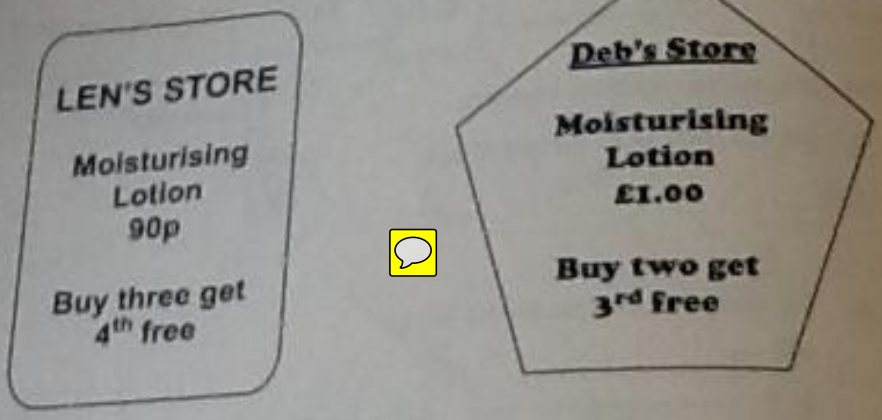
1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 ← working out the offer

7 x 1·00 = £7·00

It's cheaper for Siwan to buy the moisturising lotion from Deb's store.

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

Both Len's Store and Deb's Store sell the same moisturising lotion, in the same sized bottles



Siwan needs to buy 12 bottles of moisturising lotion.
Which of the two stores has the better offer for Siwan?
You must show all your working.

[6]

Lens

12 x 90 £1080 ← working out for 12 bottles ✓

90 3, 4, 6, 7, 9, 10, 11, 12 ← working out the offer ✗

99 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 ✗

108 9 x 90 = £810 ✓

Deb's

12 x 1·00 = £12·00 ← working out for 12 bottles ✓

1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 ← working out the offer ✗

7 x 1·00 = £7·00 ✗

It's cheaper for Siwan to buy the moisturising lotion from Deb's store.

So M1 A1 A0 QWC 1

3

Examiner only

7. *(a)* **Showing all your working**, write $\frac{1}{2}$, $\frac{5}{8}$, and $\frac{3}{4}$ in order, starting with the largest. [3]

(b) Write down 50p as a fraction of £4 in its simplest form. [2]

7. (a) Showing all your working, write $\frac{1}{2}$, $\frac{5}{8}$, and $\frac{3}{4}$ in order, starting with the largest. [3]

Order = $\frac{6}{8}$ or $\frac{3}{4}$ > $\frac{5}{8}$ > $\frac{1}{2}$ or $\frac{4}{8}$

7. (a) **Showing all your working**, write $\frac{1}{2}$, $\frac{5}{8}$, and $\frac{3}{4}$ in order, starting with the largest. [3]

Exam only

$\frac{1}{2} = \frac{4}{8}$ ×4 ×4 ✓

$\frac{5}{8} = \frac{5}{8}$ ✓

$\frac{3}{4} = \frac{6}{8}$ ×2 ×2 ✓

Order = $\frac{6}{8}$ or $\frac{3}{4}$, $\frac{5}{8}$, $\frac{1}{2}$ or $\frac{4}{8}$ ✓

3

Examiner only

7. (a) **Showing all your working**, write $\frac{1}{2}$, $\frac{5}{8}$, and $\frac{3}{4}$ in order, starting with the largest. [3]

$\frac{3}{4}, \frac{5}{8}, \frac{1}{2}$

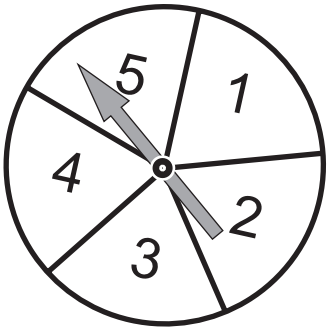
Examiner only

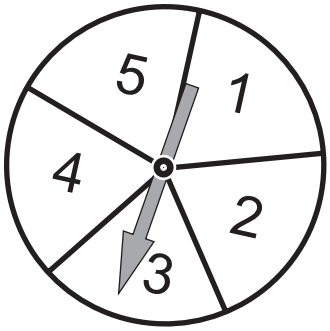
7. (a) **Showing all your working**, write $\frac{1}{2}$, $\frac{5}{8}$, and $\frac{3}{4}$ in order, starting with the largest. [3]

$\frac{3}{4}, \frac{5}{8}, \frac{1}{2}$ ✓

Examiner only

16.





The two spinners are spun.
The score is the total of the two numbers shown on the spinners.
The score shown above is eight.

There are two different game cards, card A and card B.
A game is played, crossing out the scores from the spinners on the game card as the spinners are spun repeatedly.
The first game card with all four scores crossed out is the winning card.

Game card A

3	2
9	10

Game card B

4	6
5	7

Which game card is more likely to be the winning card?
You must show your working and give a reason for your answer. [4]

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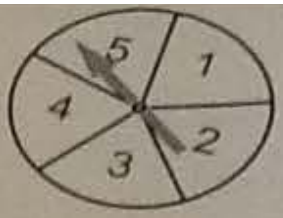

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Game card A

3	2
9	10

Game card B

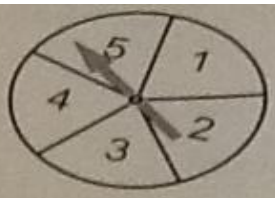
4	6
5	7

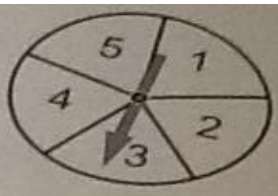
Which game card is more likely to be the winning card?
You must show your working and give a reason for your answer.

[4]

Game Card ~~by~~ B is most likely going to win because the numbers are spread out and are not too high or too low. 1+1=2 1+2=3 1+4=5 1+5=6 1+6=7. The numbers that are shown on this spinner has more of a chance to land on the numbers that could come to 7 or 6.

IF you add all the ~~possible~~ ways of the ~~cards~~ answers you'll get from these two spinners you will have more of a chance to get Game Card B's instead of Game Card A For example 4+2=6 4+3=7 / 2+5=7 / 5+4=9 most of the answers you will get will come to the same as Game Card B as shown from a few of the examples





The two spinners are spun.
The score is the total of the two numbers shown on the spinners.
The score shown above is eight.

There are two different game cards, card A and card B.
A game is played, crossing out the scores from the spinners on the game card as the spinners are spun repeatedly.
The first game card with all four scores crossed out is the winning card.

Game card A

3	2
9	10

Game card B

4	6
5	7

Which game card is more likely to be the winning card?
You must show your working and give a reason for your answer.

[4]

Game Card B is most likely going to win because the numbers are spread out and are not too high or too low. 1+1=2 1+2=3 1+4=5 1+5=6 1+6=7. The numbers that are shown on this spinner has more of a chance to land on two numbers that could come to 7 or 6.

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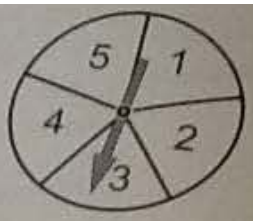
Examiner only

B1

16.



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Game card A

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9	10

Game card B

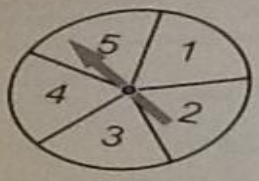
4	6
5	7

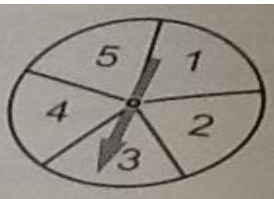
Which game card is more likely to be the winning card?
You must show your working and give a reason for your answer. [4]

1+1=2 1+2=3 2+3=5 3+4=7 4+5=9
2+2=4 1+3=4 2+4=6 3+5=8
3+3=6 1+4=5 2+5=7
4+4=8 1+5=6
5+5=10

Card B is more likely to win the game because there is more possible ways to make the numbers, 4, 5, 6 and 7 when the Spinner is Spun.

16.





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Game card A

3	2
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Game card B

4	6
5	7

Which game card is more likely to be the winning card?
You must show your working and give a reason for your answer. [4]

1+1=2
1+2=3
2+3=5
3+4=7
4+5=9
2+2=4
1+3=4
2+4=6
3+5=8
3+3=6
1+4=5
2+5=7
4+4=8
1+5=6
5+5=10

Card B is more likely to win the game because there is more possible ways to make the numbers, 4, 5, 6 and 7 when the Spinner is Spun.

B2
E1
3