

Name: \_\_\_\_\_

GCSE Maths Practice Paper  
CCEA Unit M6  
Set A  
Paper 2 - Calculator



**Equipment**

1. A black ink ball-point pen.
2. A pencil.
3. An eraser.
4. A ruler.
5. A pair of compasses.
6. A protractor.
7. A calculator

**Guidance**

1. Read each question carefully.
2. Don't spend too long on one question.
3. Attempt every question.
4. Check your answers seem right.
5. Always show your workings

**Information**

1. Time: 1 hour
2. The maximum mark for this paper is 50.
3. The marks for questions are shown in brackets
4. You may use tracing paper.

Question	Mark	Available
1		2
2		4
3		3
4		4
5		4
6		3
7		4
8		3
9		2
10		4
11		3
12		3
13		4
14		2
15		1
16		4
<b>Total</b>		<b>50</b>

1. Caoimhe is driving through Spain and sees the sign below.



This is the speed limit in kilometres per hour.

What is the speed limit in miles per hour?

.....miles per hour  
(2)

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2. Here are four cards.  
Each card has a number on it.

8

4

9

2

Write down all the 3-digit **odd** numbers that can be made using the cards.

.....

.....

.....

(4)

3. There are 20 counters in a bag.

2 of the counters are white.

1 of the counters is pink.

4 of the counters are black.

The rest of the counters are purple.

Carter takes a counter at random from the bag.

Find the probability that the counter is purple.

.....  
**(3)**

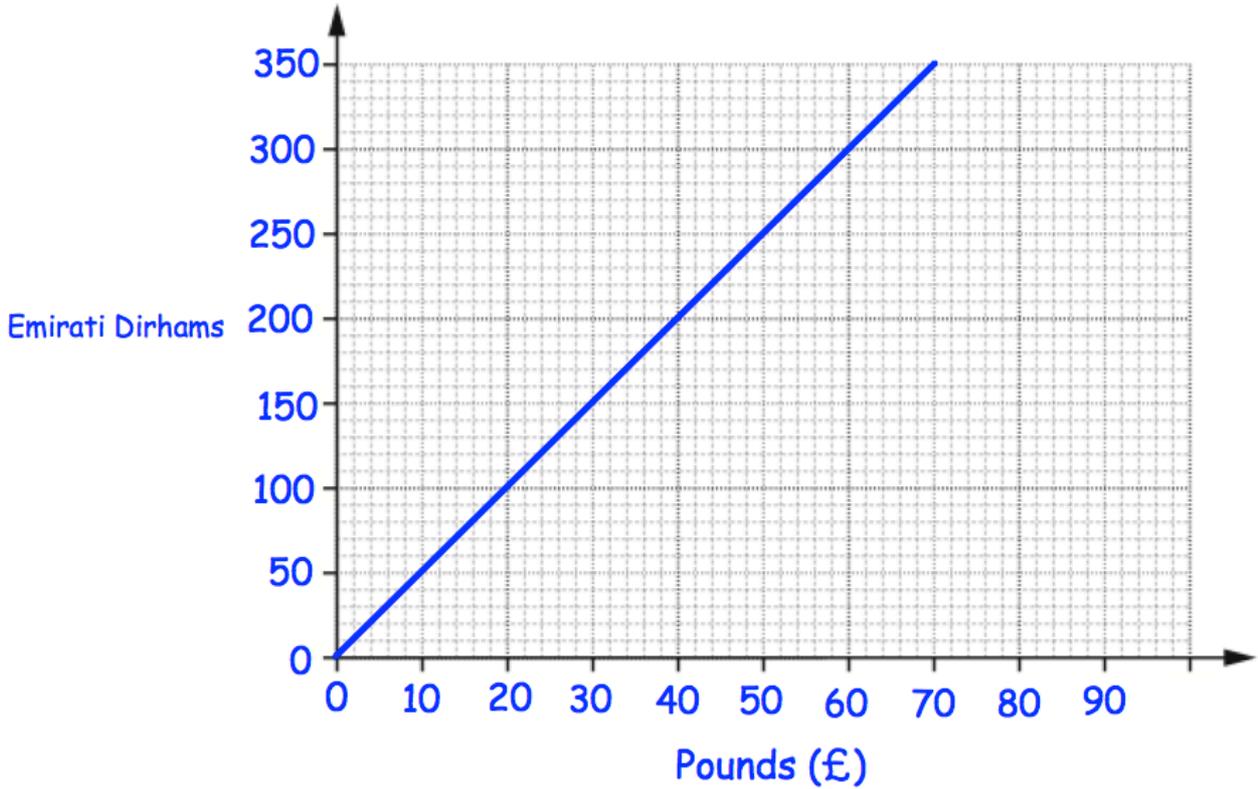
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4. Chloe bought 2 litres of lemonade for £1.50  
She sells 250ml glasses of lemonade for 40p each.  
Chloe sells all the lemonade.

Work out her profit

.....  
**(4)**

5.



(a) Convert £50 into Dirhams.

.....Dirhams  
(1)

(b) Convert 175 Dirhams into Pounds (£).

£.....  
(1)

Tom wants to buy a camera.  
In London the camera costs £380.  
In Abu Dhabi the camera costs 2000 Dirhams.

In which city is the camera cheaper and by how much?  
Give your answer in pounds.

City:..... £.....  
(2)

6. Here are some patterns made from dots.



Pattern 1



Pattern 2



Pattern 3

(a) Complete the table for Pattern 4.

Pattern Number	1	2	3	4
Number of dots	3	5	7	

(1)

Harry wants to find the number of dots in Pattern number 50.

(b) Write down a method he could use.

.....

.....

(1)

Dots are used to make a different sequence of patterns.  
The first three patterns are shown.



Pattern 1



Pattern 2



Pattern 3

(c) How many dots are needed to make Pattern 6?

.....

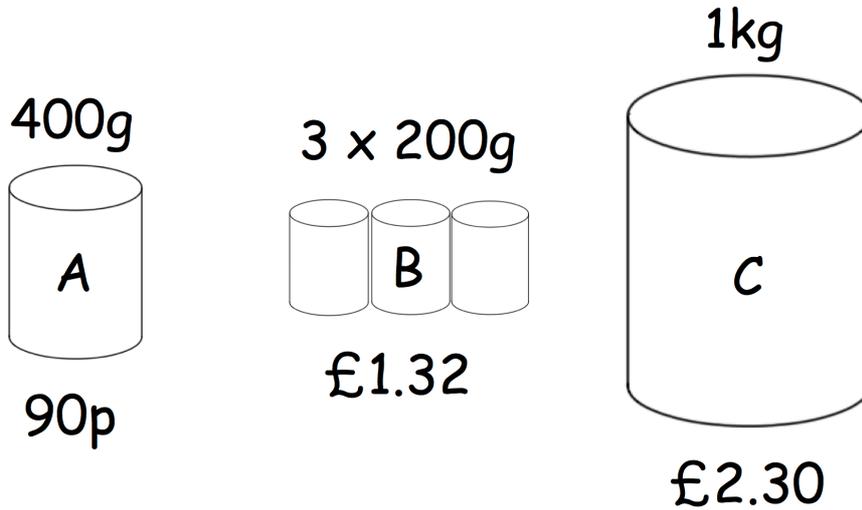
(1)

7. A shop sells baked beans in three different sizes.

Option A: 400g tin for 90p

Option B: 3 x 200g pack for £1.32

Option C: 1kg large tin for £2.30



Which is the best value for money?

8. James has received two job offers.

A job in Milan which pays €49,980 a year.

A job in Boston which pays \$54,400 a year.

The exchange rates were  $\text{£}1 = \$1.28$  and  $\text{£}1 = \text{€}1.19$

Which job offer has the highest salary?

You must show your working.

.....  
(3)

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9.



This sign is correct to the nearest hundred.

(a) What is the lowest possible number of people that live in Ballycastle?

.....  
(1)

(b) What is the greatest possible number of people that live in Ballycastle?

.....  
(1)

10. Charlotte and Melissa booked theatre tickets costing £180.

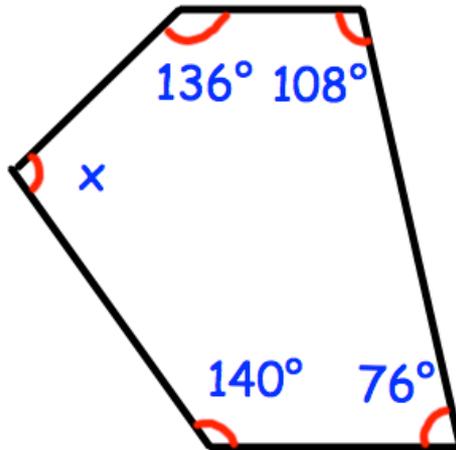
They have a voucher that entitles them to 20% off the total price.

Charlotte and Melissa share the total cost of the tickets in the ratio 5:7.

Work out how much more Melissa pays than Charlotte.

.....  
**(4)**

11. Shown below is a pentagon.



Work out the size of angle  $x$ .

.....<sup>o</sup>  
**(3)**

12. Mrs Jenkins is organising a charity raffle.

She sells 3200 tickets for £3 each.

The probability that someone wins a prize is 0.07

Each prize cost £13

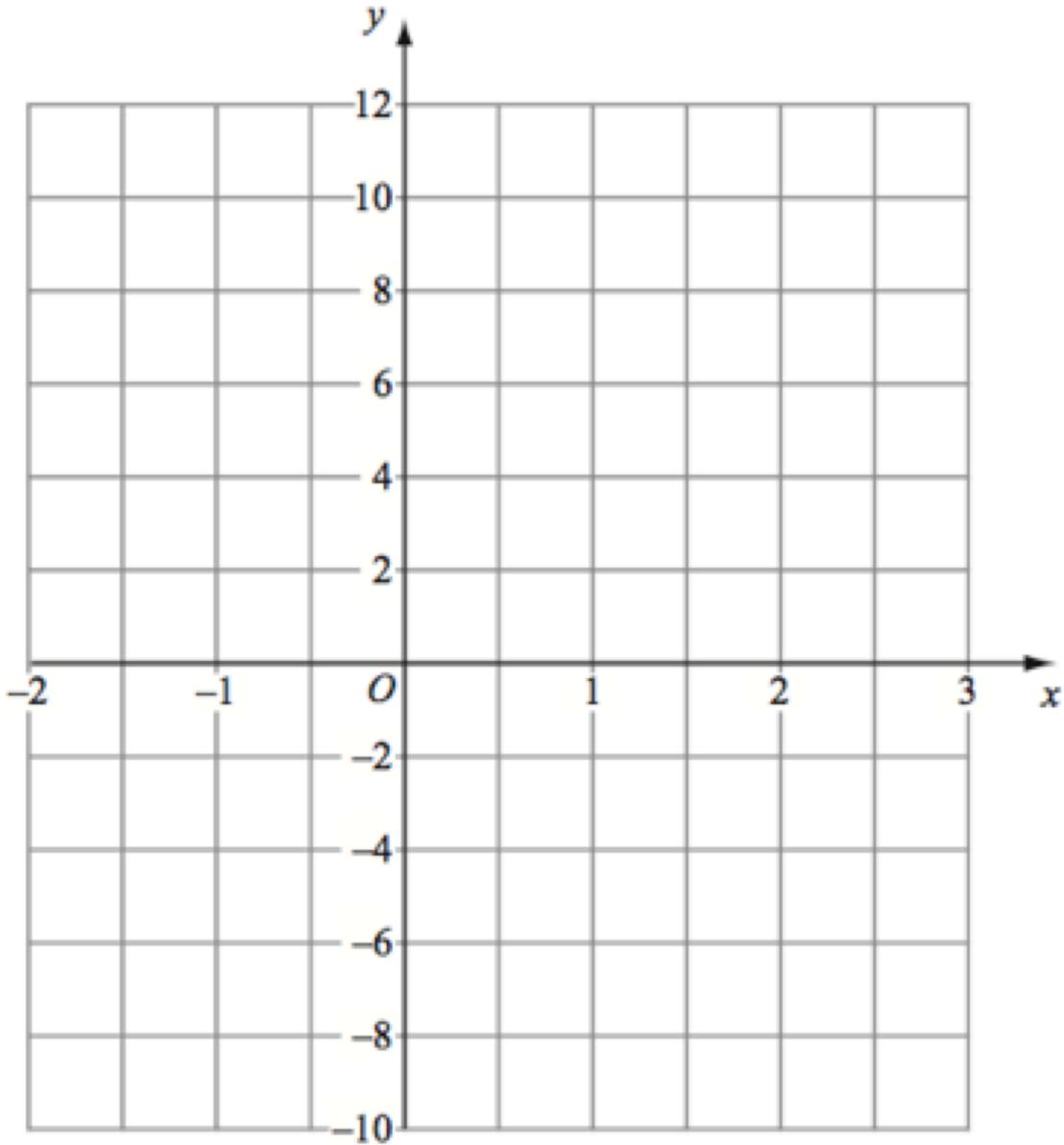
The profit is donated to charity.

Work out how much money Mrs Jenkins donates to charity.

£.....  
(3)

13. (a) Draw the graph of  $y = x^2 + x - 4$  for the values of  $x$  from -2 to 3.

$x$	-2	-1	0	1	2	3
$y$						



(3)

(b) Use your graph to find estimates of the solutions to the equation  $x^2 + x - 4 = -3$

$x = \dots\dots\dots$  or  $x = \dots\dots\dots$

(1)

14. A sequence of numbers is shown.

5    8    11    14    17    ...    ...

Find an expression for the  $n$ th term of the sequence.

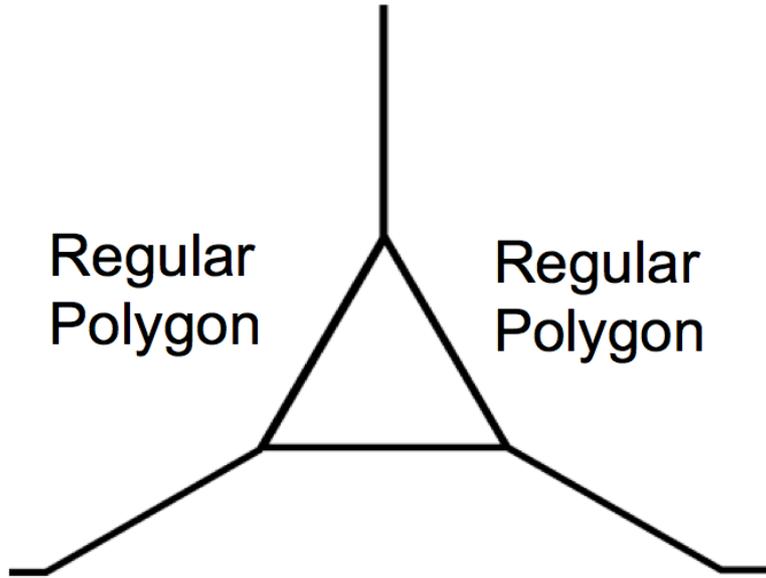
.....  
**(2)**

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15. Simplify  $(w^7)^2$

.....  
**(1)**

16. Shown below are two identical regular polygons and an equilateral triangle.



Calculate the number of sides each regular polygon has.

.....  
(4)