Name:

GCSE Maths Practice Paper
CCEA Unit M7
Set A
Paper 1 - Non-Calculator

Corbettmαths

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.

Question	Mark	Available
1		3
2		2
3		5
4		5
5		3
6		3
7		3
8		4
9		4
10		4
11		5
12		2
13		5
14		2
Total		50

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 15 minutes
2. The maximum mark for this paper is 50.
3. The marks for questions are shown in brackets
4. You may use tracing paper.

1.   The price of a new scooter is £1800

      Sarah pays a 40% deposit and pays the rest over 10 monthly payments.

      Find the cost of each monthly payment.

                                                                    £........................
                                                                            (3)

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2.   A sequence has the rule

            multiply the previous number by three and then add one

      Here are the first three terms of the sequence

            1, 4, 13, _____, _____

      Find the next two terms in the sequence.

                                      .... and ....
                                                                            (2)

3. Jordan has two bags, Bag A and Bag B.
The bags contains counters, each with a number written on it.

Bag A contains 5 counters, with the numbers 1, 2, 3, 4 and 5.
Bag B contains 3 counters, with the numbers 1, 2 and 3.

Jordan takes a counter at random from Bag A and then a counter at random from Bag B.

One possible outcome is that he takes out a counter with a 3 on it from Bag A and then a counter with a 1 on it from Bag B, which can be written as (3, 1).

(a) Complete the table below to show all the possible outcomes.

Bag A

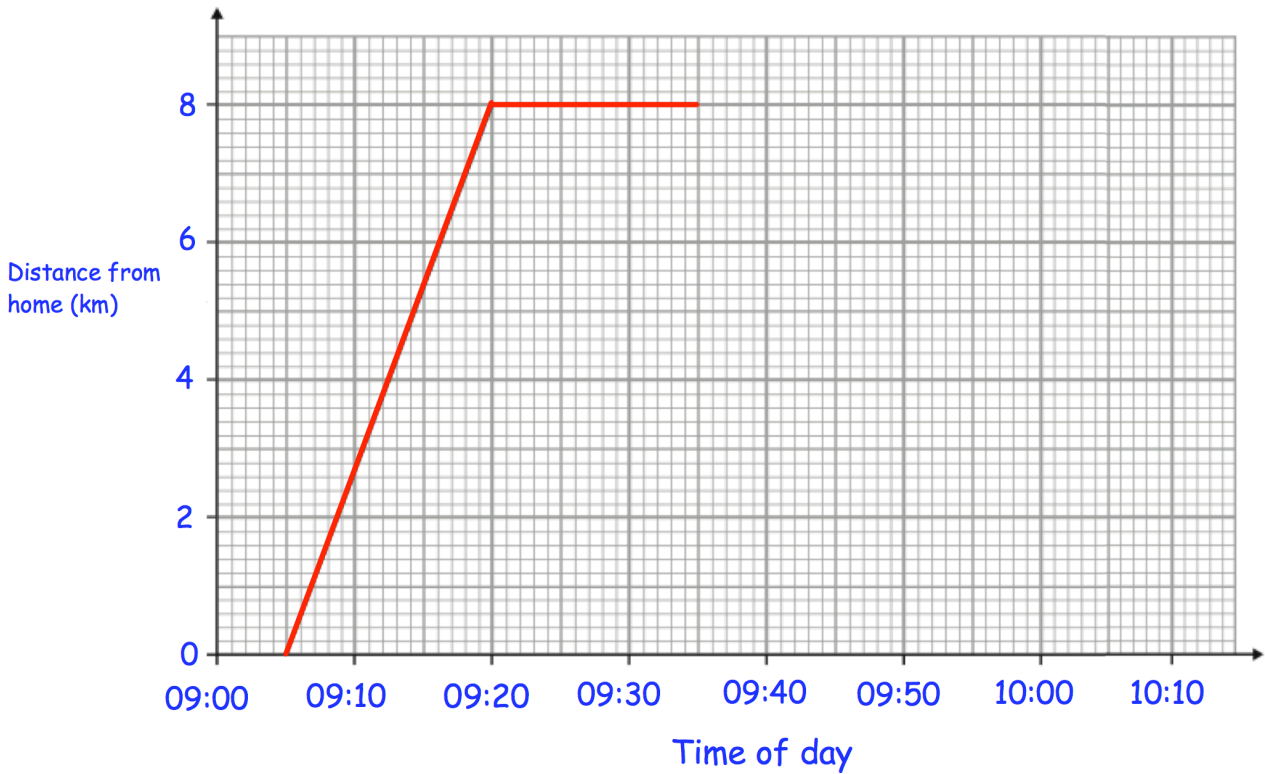|		1	2	3	4	5
	1	(1, 1)	(2, 1)	(3, 1)		
Bag B	2	(1, 2)	(2, 2)			
	3	(1, 3)				

(2)

(b) What is the probability that the outcome is (4, 3)?

....
(1)

(c) What is the probability that the outcome **does not** have two counters with the same number?

....
(2)

4. Ellie cycled from her home to her friend's house.
She stayed at her friend's house and then travelled home.

(a) At what time did Ellie leave home?

....

(1)

(b) What is Ellie's average speed when cycling to her friend's house?

……………………km/h

(2)

Ellie cycled home at an average speed of 16km/h

(c) Complete the distance-time graph.

(2)

5.

30 miles

60°

24 miles
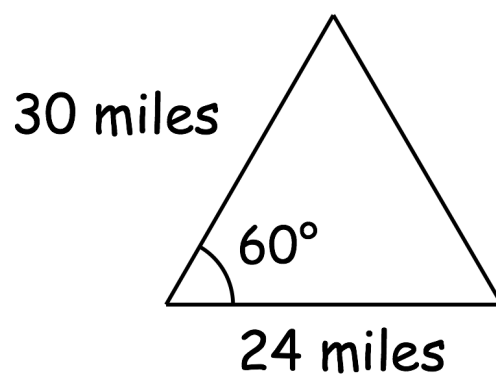
Not drawn
accurately

Using a scale of 1cm to 3 miles, draw a scale drawing of the triangle.

(3)

6. Here is the list of ingredients for making 20 biscuits.

<p style="text-align:center">makes 20</p>
<p style="text-align:center">100g flour
120g butter
80g icing sugar
25g chocolate</p>

Carlos wants to make as many biscuits as possible.
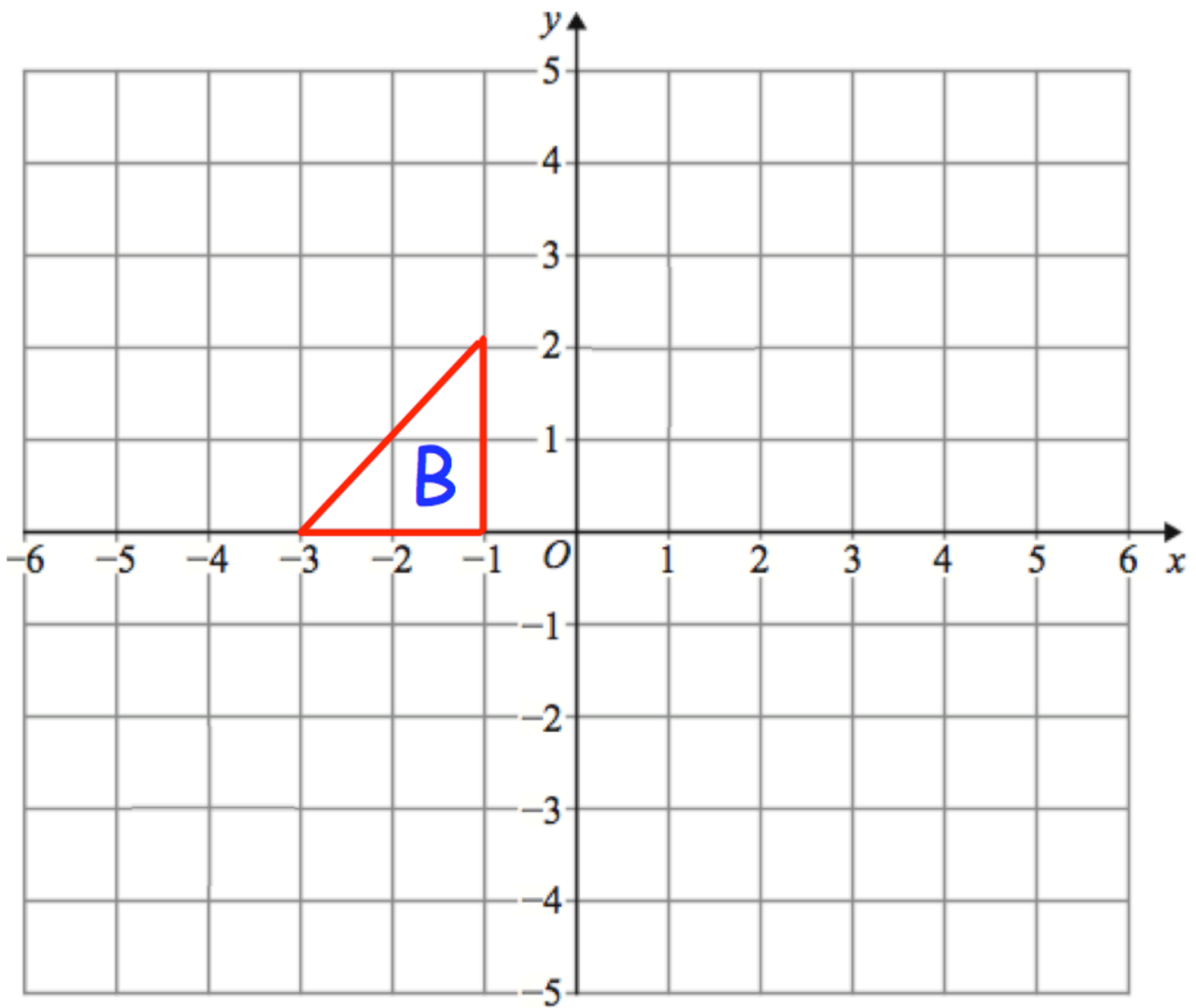He has:

      700g of flour
      600g of butter
      220g of icing sugar
      1kg of chocolate

Work out how many biscuits he can make

....

(3)

7.

(a) Translate triangle B, 5 squares right and 2 squares up.

Label the new triangle C.

(1)

(b) Rotate triangle C, 180° about the origin.

Label the new triangle D.

(2)

8. A bag contains red, white, green, yellow and blue counters.
A counter is to be picked at random from the bag.

The table gives information about the probability of selecting some of the colours.

Colour	Red	White	Green	Yellow	Blue
Probability	0.17		0.3		0.11

The probability of a white counter is the twice the probability of a yellow counter.

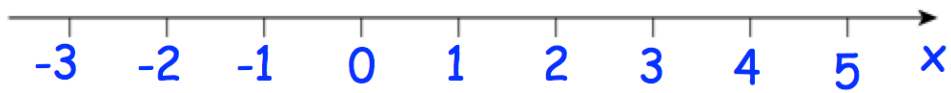Work out the probability of picking a white counter from the bag.

....

(4)

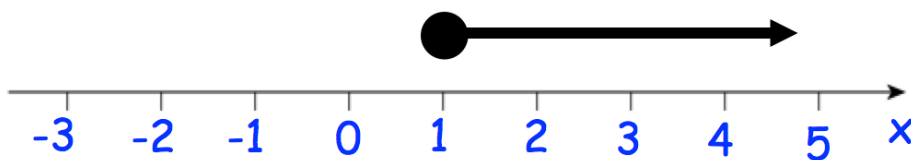9.   (a) Solve the inequality $5x + 15 < 3 - x$

....
(2)

(b)   Represent your answer to (a) on this number line.

(1)

(c)   Write down the inequality shown in the diagram below.

....
(1)

10. The straight line $y = 2x + 3$ has been drawn on the grid.
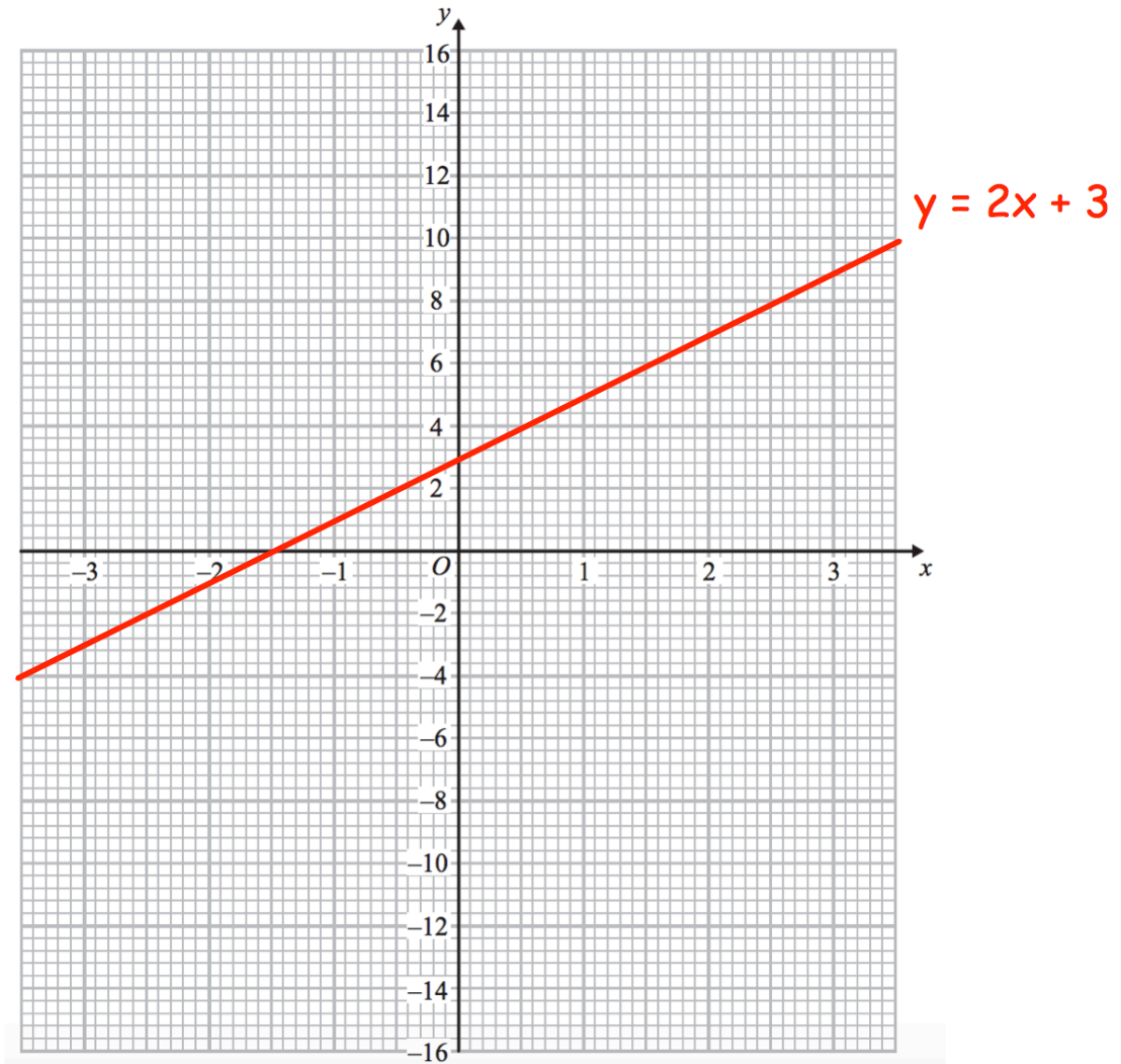
Using graphs, solve the simultaneous equations

$y = 2x + 3$ and $y = -3x + 8$

x = …………….……….. and y = ……………………..

(4)

11. There are 50 sweets in a jar.
In a trial, a sweet is chosen at random and then it is replaced.
The results are recorded after every 20 trials.
The graph shows the relative frequency of a blue sweet
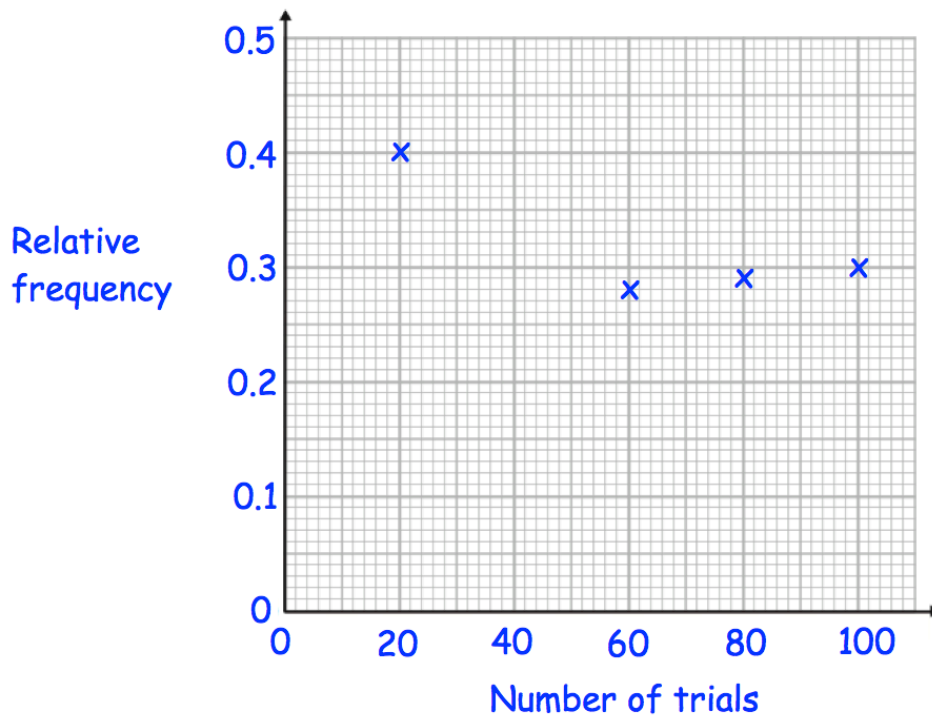
In the first forty trials, ten blue sweets were chosen.

(a) Plot this result on the graph.

(1)

(b) What is the best estimate, from the graph, of the probability of choosing a blue sweet?
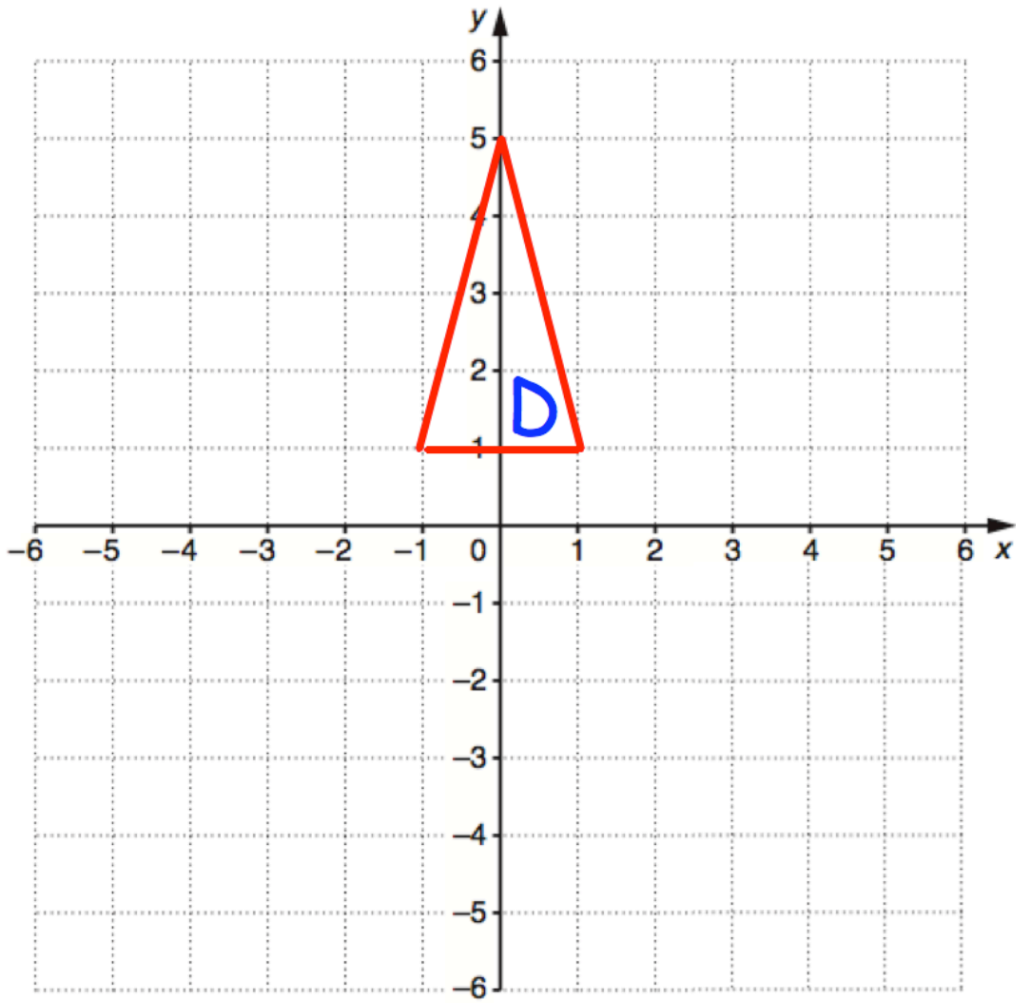Explain your answer.

....

....

....

(2)

(c) Use your answer to estimate the number of blue sweets in the jar.

....

(2)

12.

Reflect triangle D in the line $y = -x$

(2)

13.   Three bananas and two pears cost 95p.
        Five bananas and three pears cost £1.51

        Find the cost of ten bananas and ten pears.

....
(5)

14. Work out $(4.5 \times 10^7) \div (5 \times 10^{-2})$

Give your answer in standard form.

....

(2)