

**MATHEMATICS PRACTICE PAPER**  
**PAPER 1**  
**FOUNDATION TIER**

1 hour 30 minutes

**(Linear paper - November 2015)**

Question	/Topic	Marc/ Mark	Allan o / Out of
1	General number e.g. multiples, factors and rounding		11
2	Simple sequence, decimals and estimation		9
3	Using a worded formula		6
4	Probability words		4
5	Simplifying, substitution and solving simple equations		8
6	Coordinates		3
7	A problem involving metric units		6
8	Area of a rectangle, perimeter and long multiplication		7
9	Scale and bearings		6
10	Angles		5
Total			65

1. (a) (i) Write down, in figures, the number two million, thirty-one thousand and four. [1]

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(ii) Write down, in words, the number 81 305. [1]

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(b) Using only the numbers in the following list,

24      41      63      36      46      18

write down

(i) two numbers that add up to 60, [1]

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(ii) two numbers which differ by 28, [1]

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(iii) a multiple of 7. [1]

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(c) Write 4523

(i) correct to the nearest 10, [1]

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(ii) correct to the nearest 1000. [1]

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(d) Write down all the factors of 15. [2]

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(e) Theo uses each of the digits 5, 7, 2 and 6, once and once only, to make four-digit numbers.

(i) What is the smallest number that he can make? [1]

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(ii) What is the largest odd number that he can make? [1]

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2. (a) Write down the next term in each of the following sequences. [2]

(i) 15, 23, 31, 39, .....

(ii) 81, 27, 9, 3, .....

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(b) Write down a number greater than five thousand in which the hundreds digit is 4. [2]

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(c) Write  $\frac{3}{25}$  as a decimal .....

Write 13% as a decimal .....

Write 13%, 0.2 and  $\frac{3}{25}$  in ascending order. [3]

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(d) Showing all your working, find an estimate for the value of  $303 \div 4.8$ . [2]

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

A computer technician takes 45 minutes to service a computer.

She charges using the following formula:

$$\text{Charge} = \text{£}30 \times \text{number of hours worked} + \text{total cost of parts}$$

Calculate the charge for servicing 8 computers when the total cost of parts was £65. [6]

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4. Choose the best expression from those given below to complete the following sentences. [4]

**impossible      unlikely      an even chance      likely      certain**

- (a) It is ..... that the sun will set tonight.
- (b) It is ..... that I get a tail when a fair coin is tossed.
- (c) It is ..... that I score a total of 1 when two dice are thrown.
- (d) I buy one ticket in a raffle in which a total of 1000 tickets are sold.  
It is ..... that I will win the top prize.

5. (a) Simplify  $6x - 4x + x$ . [1]

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(b) Use the formula  $P = 5A - 6B$  to find the value of  $P$  when  $A = 7$  and  $B = 4$ . [2]

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(c) The  $x$  and  $y$  values of the coordinates of the points  $(4, 7)$ ,  $(5, 8)$ ,  $(6, 9)$ , .....,  $(x, y)$  all follow the same rule.  
Write down a rule connecting  $x$  and  $y$ . [2]

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(d) Solve

(i)  $3y = 24$  [1]

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(ii)  $x - 4 = 11$  [1]

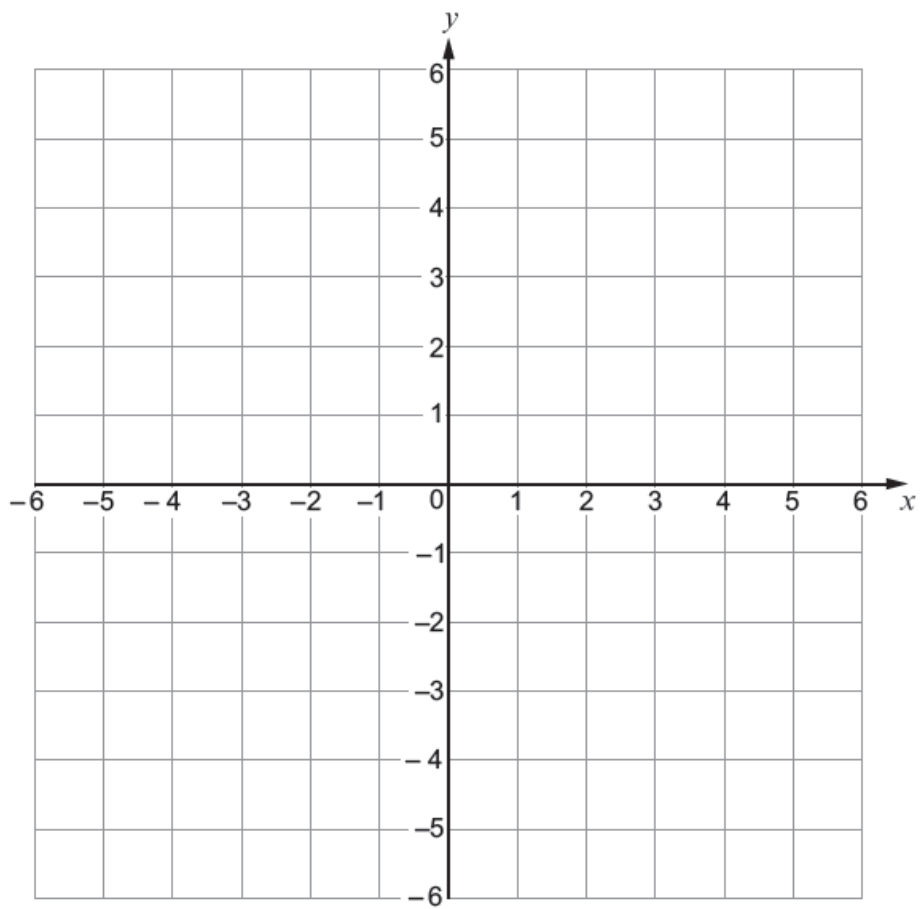
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(e) If  $n$  represents any whole number, what is the special name of the numbers represented by  $2n$ ? [1]

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6. On the squared paper below, plot the points  $A(2, 1)$ ,  $B(-3, -5)$  and  $C(4, -3)$ .

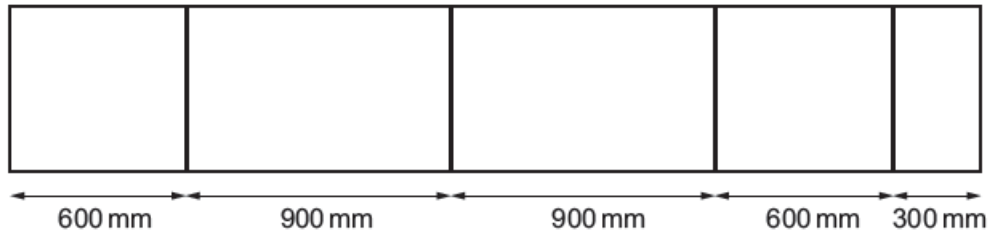
[3]



7. Kitchen cupboards of the same height can be bought in different widths. The possible widths of the cupboards are shown in the table.

<b>Width of cupboard (millimetres)</b>	<b>300</b>	<b>400</b>	<b>600</b>	<b>900</b>	<b>1000</b>	<b>1200</b>
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- (a) Five of these cupboards can fit exactly along a wall, as shown below.



*Diagram not drawn to scale*

Work out the total length of this wall.  
Give your answer in metres.

[2]

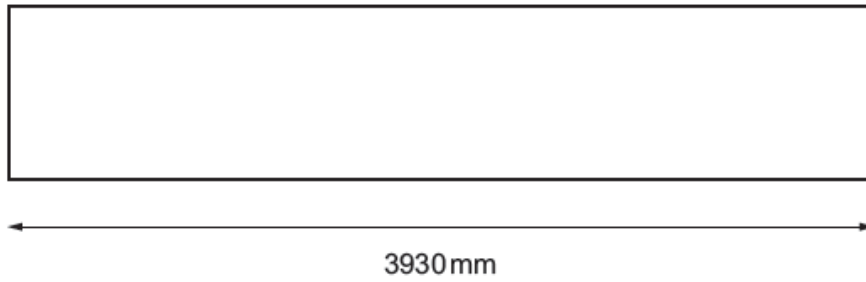
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Total length is ..... metres

(b) Here is a wall of Susan's kitchen.



She wants to put cupboards along this wall.  
Susan wants to fill as much of the space as possible.

Describe **two ways** that Susan could do this, where the selection of cupboards is different.  
You must state

- which cupboards you select, and
- why you cannot fill the whole wall with cupboards.

[4]

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8. (a) Sam keeps turkeys in a rectangular enclosure measuring 35 metres by 41 metres.

(i) Calculate the area of this enclosure. [2]

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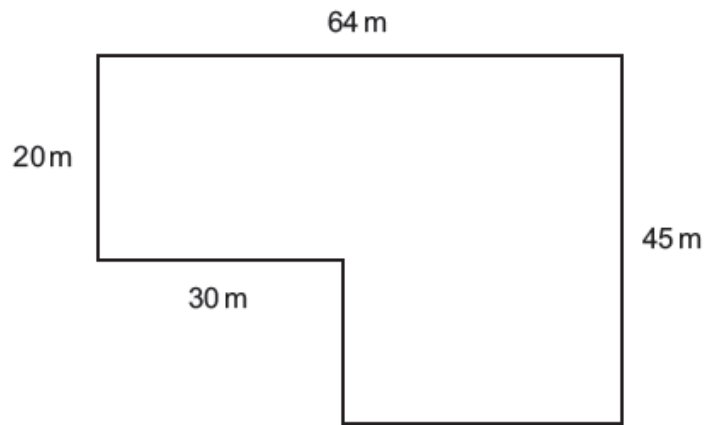
Area = ..... m<sup>2</sup>

(ii) Sam would like to allow 10 m<sup>2</sup> for each turkey.  
What is the maximum number of turkeys Sam should have in his enclosure? [1]

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(b) Sam also has this field.



*Diagram not drawn to scale*

He wants to place a fence all the way around the field.  
He has 250 metres of fencing.  
Does Sam have enough fencing?  
If he has, how much will Sam have left over?  
If not, how much more fencing does Sam need?

[4]

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(a) *A* and *B* are two rescue centres shown on a map with scale 1 cm = 5 km.

Measure and find the straight line distance, in km, from *A* to *B*.

[3]



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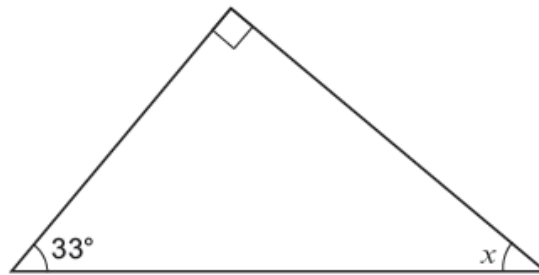
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(b) A monument is on a bearing of  $136^\circ$  from *A* and on a bearing of  $219^\circ$  from *B*. Plot the position of the monument and mark it *M*.

[3]

- (a) Calculate the size of angle  $x$ .

[2]



*Diagram not drawn to scale*

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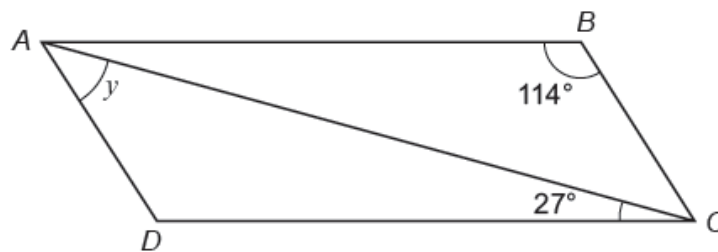
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$$x = \text{.....}^\circ$$

- (b)  $ABCD$  is a parallelogram. Calculate the size of angle  $y$ .

[3]



*Diagram not drawn to scale*

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$$y = \text{.....}^\circ$$