


|   |   |
|---|---|
| Write your name here  |   |
| Surname   | Other names   |
| <b>Pearson Edexcel</b>  | Centre Number   |
| <b>International GCSE</b>   | Candidate Number  |
| <h1 style="margin: 0;">Mathematics A</h1> <h2 style="margin: 0;">Practice paper 5F</h2>   | <br><b>Foundation Tier</b> |
| <b>Time: 2 hours</b>  | Paper Reference<br><b>4MA1/PP5F</b>   |
| <b>You must have:</b><br>Ruler graduated in centimetres and millimetres, protractor, compasses,<br>pen, HB pencil, eraser, calculator. Tracing paper may be used. | Total Marks   |

### Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Without sufficient working, correct answers may be awarded no marks.
- Answer the questions in the spaces provided  
– *there may be more space than you need.*
- **Calculators may be used.**
- You must **NOT** write anything on the formulae page.  
Anything you write on the formulae page will gain NO credit.

### Information

- The total mark for this paper is 100.
- The marks for **each** question are shown in brackets  
– *use this as a guide as to how much time to spend on each question.*

### Advice

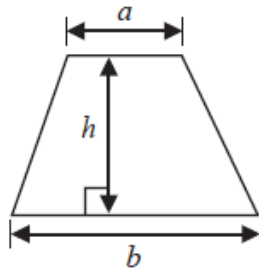
- Read each question carefully before you start to answer it.
- Check your answers if you have time at the end.

### 4MA1 Practice paper 5F

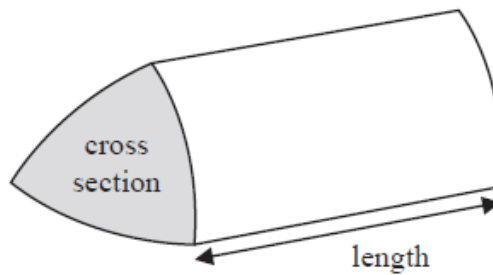
This publication may only be reproduced in accordance with Pearson Education Limited copyright policy.  
©2018 Pearson Education Limited.

**International GCSE Mathematics**  
**Formulae sheet – Foundation Tier**

**Area of trapezium** =  $\frac{1}{2}(a + b)h$

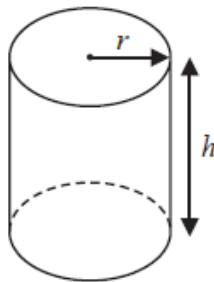


**Volume of prism** = area of cross section  $\times$  length



**Volume of cylinder** =  $\pi r^2 h$

**Curved surface area of cylinder** =  $2\pi r h$



**Answer ALL TWENTY TWO questions.**

**Write your answers in the spaces provided.**

**You must write down all the stages in your working.**

- 1** Jan recorded the number of steps she took each day last week.  
This information is shown in the table.

| <b>Day</b> | <b>Number of steps</b> |
|------------|------------------------|
| Monday     | 9780                   |
| Tuesday    | 4853                   |
| Wednesday  | 12 038                 |
| Thursday   | 15 243                 |
| Friday     | 4695                   |
| Saturday   | 4801                   |
| Sunday     | 11 856                 |

- (a) On which day did she take the least number of steps?

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

- (b) Write the number 12 038 in words.

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

- (c) Round the number 4853 correct to the nearest hundred.

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

Two of the numbers in the table are multiples of 5.

- (d) Write down these two numbers.

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

Jan takes 1200 steps to walk one kilometre.

- (e) Use this information to work out how many kilometres Jan walked on Thursday.  
Give your answer correct to the nearest kilometre.

..... kilometres  
(2)

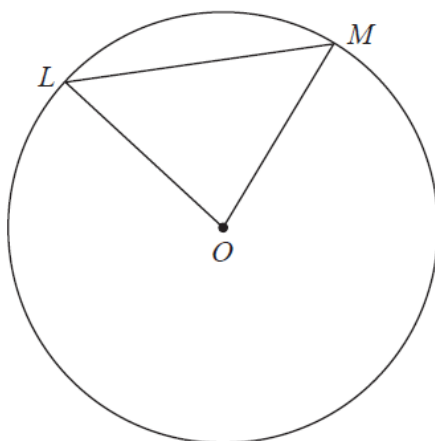
- (f) Work out the mean number of steps per day Jan took last week.

.....  
(2)

**(Total for Question 1 is 9 marks)**

---

2



$L$  and  $M$  are points on a circle, centre  $O$ .

(a) Write down the mathematical name for the straight line  $OM$ .

.....  
(1)

(b) Write down the mathematical name for the straight line  $LM$ .

.....  
(1)

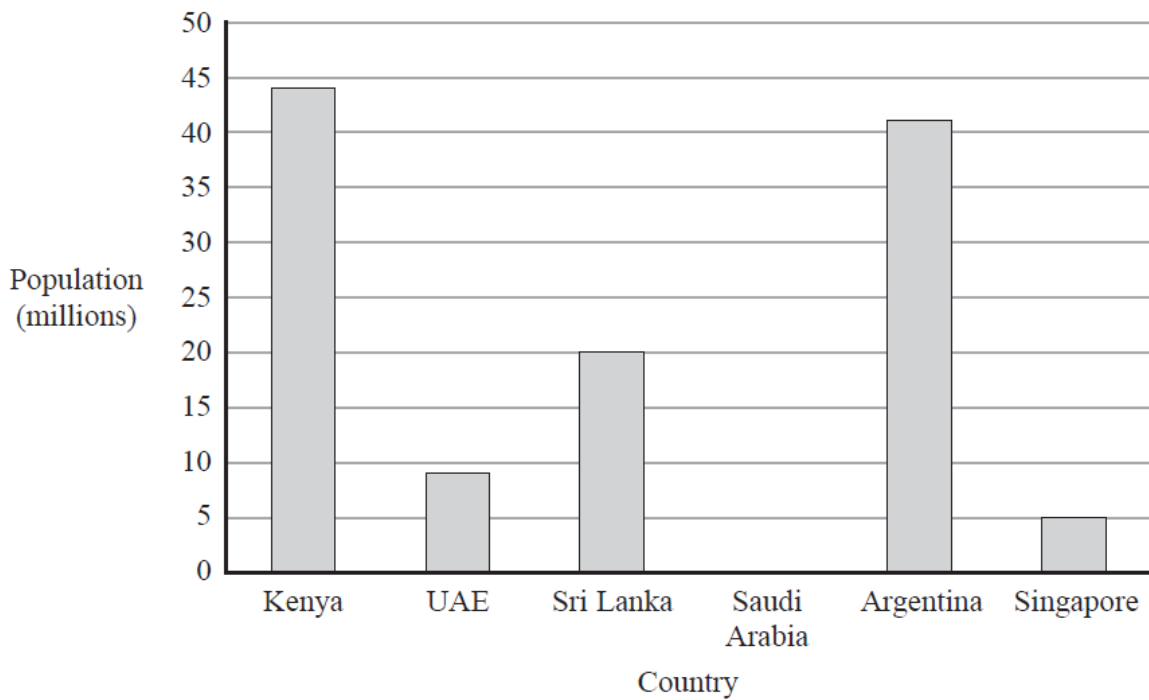
(c) On the diagram, shade a segment.

(1)

**(Total for Question 2 is 3 marks)**

---

3 The bar chart shows information about the population of each of five countries in 2013.



(a) Write down the population of Sri Lanka.  
 ..... million  
**(1)**

(b) Write down the population of the UAE.  
 ..... million  
**(1)**

(c) Which country had a population of 41 million?  
 .....  
**(1)**

Suki says,

“In 2013, the population of Singapore was  $\frac{1}{5}$  of the population of Sri Lanka.”

(d) Is Suki correct?  
 You must give a reason for your answer.  
 .....  
 .....  
**(1)**

In 2013, the population of Saudi Arabia was 29 million.

(e) Draw a bar on the bar chart to show this information.  
**(1)**

In 2013, the ratio of the population of India to the population of the UK, in millions, was 1252 : 64

(f) Write the ratio 1252 : 64 in its simplest form.

.....  
(2)

**(Total for Question 3 is 7 marks)**

---

4 The table shows information about average temperatures for five months in Beijing.

| Month    | Average temperature(°C) |
|----------|-------------------------|
| October  | 13                      |
| November | 5                       |
| December | -2                      |
| January  | -4                      |
| February | -1                      |

(a) Which of these months has the lowest average temperature?

.....  
(1)

(b) Work out the difference between the average temperature in October and the average temperature in December.

.....°C  
(2)

The average temperature in June is 28 °C higher than in January.

(c) Work out the average temperature in June.

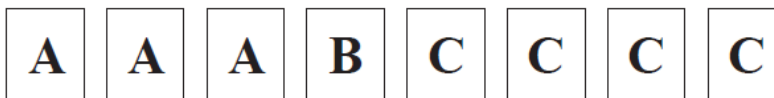
.....°C  
(2)

**(Total for Question 4 is 5 marks)**

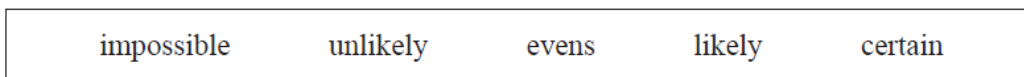
---



- 5 Here are 8 cards.  
Each card has a letter on it.



Malik takes at random one of these cards.



(a) Write down the word from the box that best describes the likelihood that Malik takes

(i) a card with the letter **B**,

.....

(ii) a card with the letter **D**.

.....

(2)

(b) Find the probability that Malik takes a card with the letter **A**.

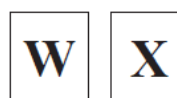
.....

(2)

Sunil has two sets of cards, Set 1 and Set 2  
Each card has a letter on it.



Set 1



Set 2

Sunil takes one card from Set 1  
He then takes one card from Set 2

(c) List all the possible combinations of cards he could get.

.....

.....

.....

(2)

(Total for Question 5 is 6 marks)

6 (a) Simplify  $p + p + p + p - p$

.....  
(1)

(b) Simplify  $6 \times e \times 5 \times f$

.....  
(1)

(c) Solve  $8m = 40$

$m =$  .....  
(1)

(d) Solve  $20 - k = 16$

$k =$  .....  
(1)

$$a = 3c + f$$

(e) Work out the value of  $c$  when  $a = 23$  and  $f = 5$

$c =$  .....  
(3)

**(Total for Question 6 is 7 marks)**

---

7 (a) Work out  $\frac{2}{9}$  of 738 kg.

..... kg  
(2)

There are 24 horses in a field.  
17 of the horses are brown.

(b) What fraction of the horses in the field are **not** brown?

.....  
(2)

(c) Show that  $\frac{10}{21} - \frac{1}{3} = \frac{1}{7}$

(2)

**(Total for Question 7 is 6 marks)**

---

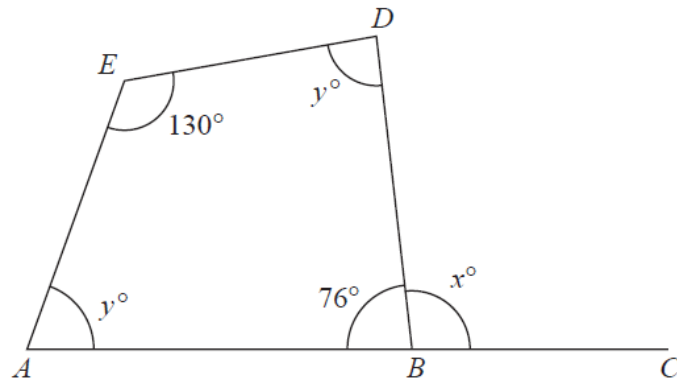


Diagram **NOT**  
accurately drawn

$ABC$  is a straight line.  
 $ABDE$  is a quadrilateral.

(a) (i) Work out the value of  $x$ .

$x = \dots\dots\dots$

(ii) Give a reason for your answer.

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

(b) Work out the value of  $y$ .

$y = \dots\dots\dots$   
(3)

Each exterior angle of a regular polygon is  $18^\circ$

(c) Work out the number of sides of this regular polygon.

.....  
(2)

**(Total for Question 8 is 7 marks)**

9 Here is a list of ingredients for making 24 Rocky Road Crunchy Bars.

| <b>Rocky Road Crunchy Bars</b> |              |
|--------------------------------|--------------|
| Ingredients for 24 bars        |              |
| 125 grams                      | butter       |
| 300 grams                      | chocolate    |
| 3 tablespoons                  | syrup        |
| 200 grams                      | biscuits     |
| 100 grams                      | marshmallows |
| 2 teaspoons                    | icing sugar  |

Silvester wants to make 30 Rocky Road Crunchy Bars.

(a) Work out the amount of marshmallows he needs.

..... grams  
(2)

Nigella makes some Rocky Road Crunchy Bars.  
She uses 850 grams of chocolate.

(b) Work out the number of Rocky Road Crunchy Bars she makes.

.....  
(2)

**(Total for Question 9 is 4 marks)**

---

- 10 In a sale, normal prices are reduced by 35%.  
The normal price of a bed is \$1200.

Work out the sale price of the bed.

\$ .....

(Total for Question 10 is 3 marks)

---

- 11 The diagram shows a rectangle and a circle.

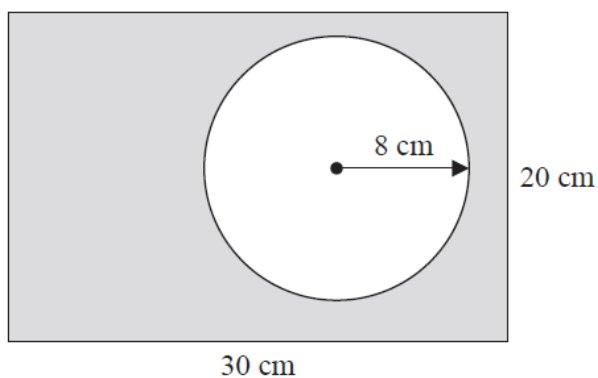


Diagram **NOT**  
accurately drawn

The rectangle has length 30 cm and width 20 cm.  
The circle has radius 8 cm.

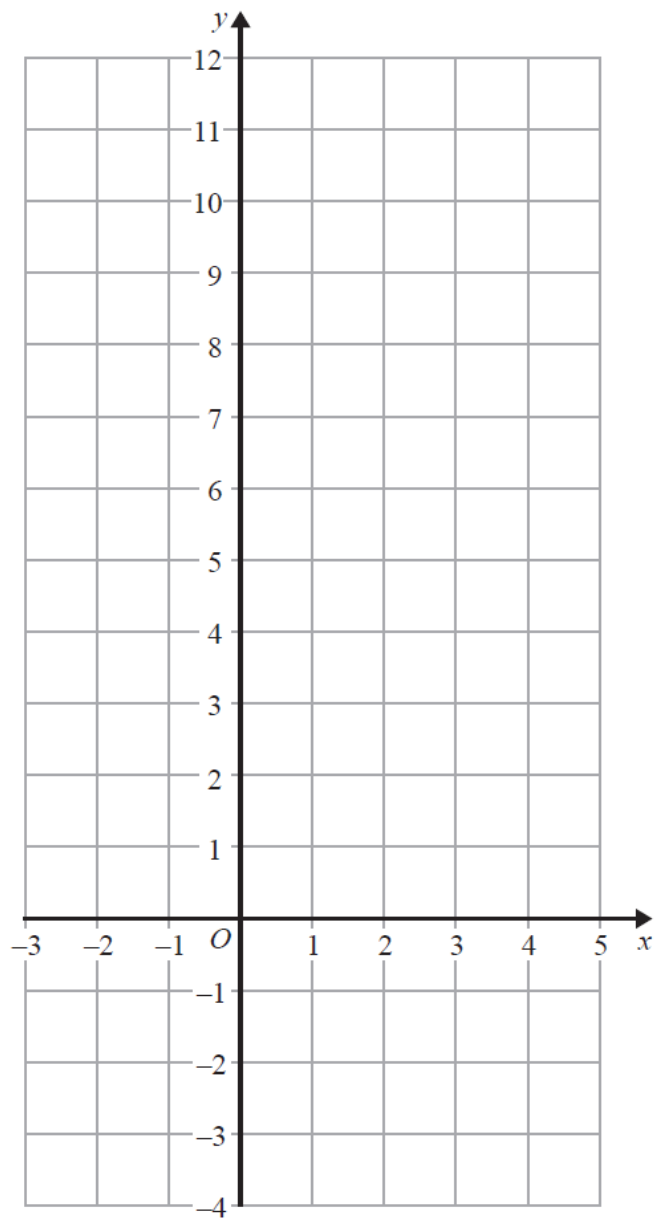
Work out the area of the shaded region.  
Give your answer correct to 3 significant figures.

..... cm<sup>2</sup>

(Total for Question 11 is 4 marks)

---

12 On the grid, draw the graph of  $y + 2x = 6$  for values of  $x$  from  $-2$  to  $4$ .



**(Total for Question 12 is 4 marks)**

---

13 The area of the floor of a room is  $12 \text{ m}^2$ .

Change  $12 \text{ m}^2$  into  $\text{cm}^2$ .

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

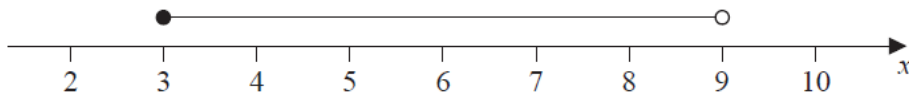
**(Total for Question 13 is 2 marks)**

---

14 (a) Simplify  $\frac{w^5 \times w^8}{w^4}$

.....  
(2)

(b) Write down the inequality shown on the number line.

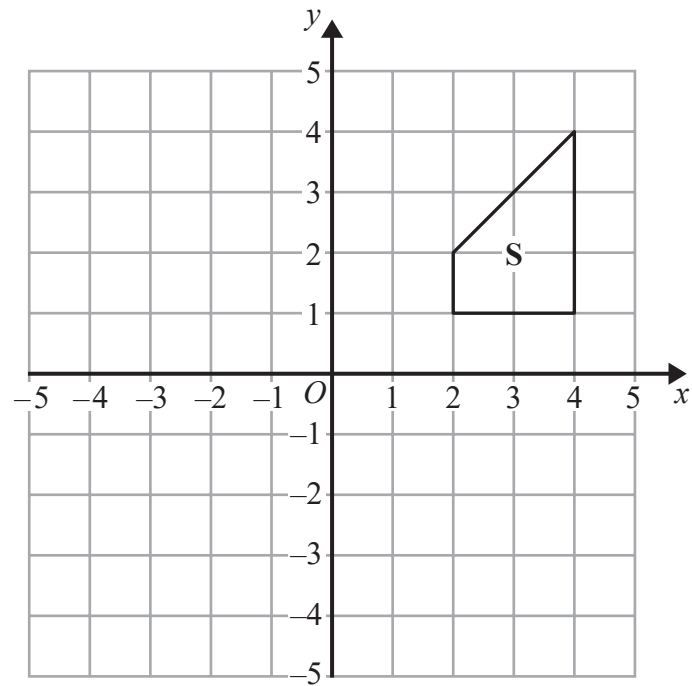


.....  
(2)

**(Total for Question 14 is 4 marks)**

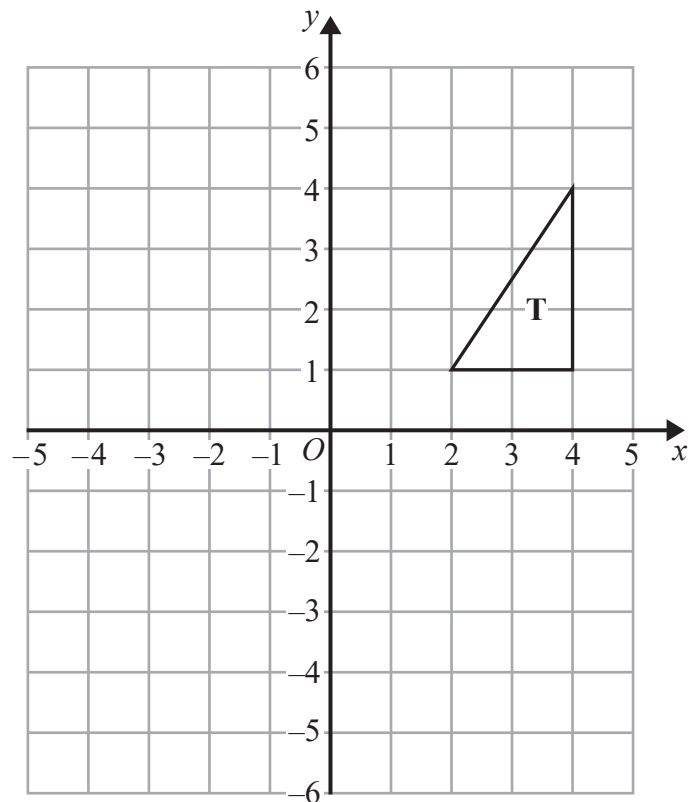
---





(a) On the grid above, translate shape **S** by 1 square to the left and 3 squares down.

(1)



(b) On the grid, rotate triangle **T**  $90^\circ$  clockwise about  $(0, 2)$ .

(2)

(Total for Question 15 is 3 marks)

16 The table gives information about the weights of 20 rugby players.

| Weight ( $w$ kg)   | Frequency |
|--------------------|-----------|
| $80 < w \leq 90$   | 3         |
| $90 < w \leq 100$  | 5         |
| $100 < w \leq 110$ | 7         |
| $110 < w \leq 120$ | 4         |
| $120 < w \leq 130$ | 1         |

(a) Write down the modal class.

.....  
(1)

(b) Work out an estimate for the total weight of these 20 rugby players.

..... kg  
(3)

**(Total for Question 16 is 4 marks)**

---

17 Here is an isosceles triangle.

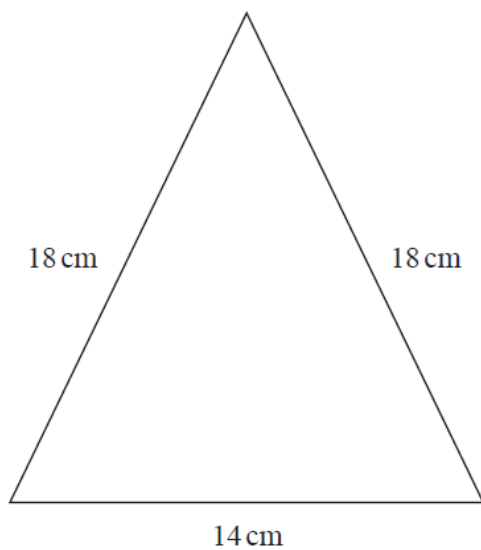


Diagram **NOT**  
accurately drawn

Work out the area of the triangle.  
Give your answer correct to 3 significant figures.

..... cm<sup>2</sup>

**(Total for Question 17 is 4 marks)**

---

18 The diagram shows a parallelogram  $ABCD$ .

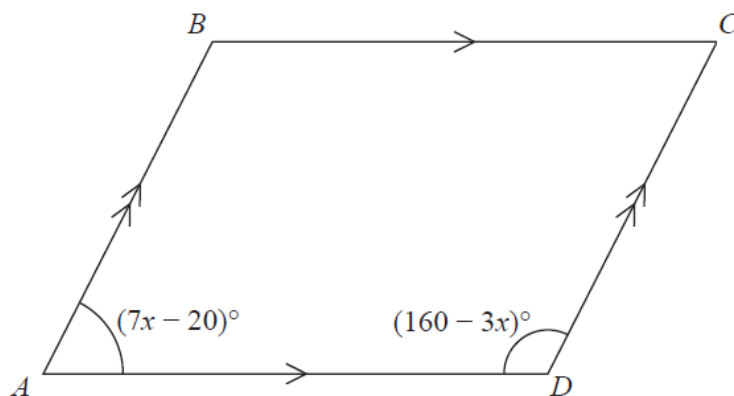


Diagram **NOT** accurately drawn

Angle  $BAD = (7x - 20)^\circ$   
Angle  $ADC = (160 - 3x)^\circ$

Work out the value of  $x$ .  
Show clear algebraic working.

$x = \dots\dots\dots$

**(Total for Question 18 is 3 marks)**

---

**19**  $m = 3^4 \times 5^3$   
 $n = 3^3 \times 5^2 \times 11$

(a) Find the Lowest Common Multiple (LCM) of  $m$  and  $n$ .

.....  
(2)

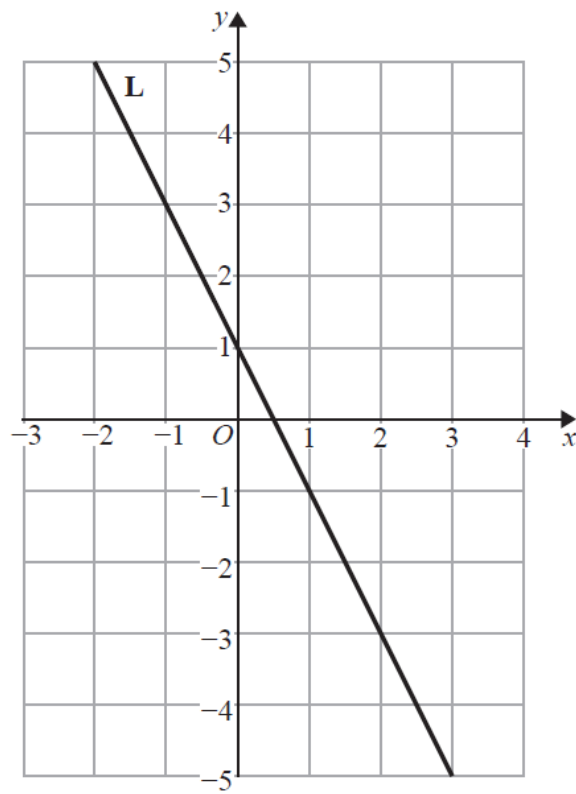
(b) Find the Highest Common Factor (HCF) of  $5m$  and  $3n$ .

.....  
(2)

**(Total for Question 19 is 4 marks)**

---

20 Here is the straight line **L** drawn on a grid.



Find an equation for **L**.

.....  
**(Total for Question 20 is 2 marks)**

---

- 21 The table shows the population, correct to two significant figures, of each of six countries in April 2016.

| Country   | Population (April 2016) |
|-----------|-------------------------|
| Hungary   | $9.8 \times 10^6$       |
| Mexico    | $1.3 \times 10^8$       |
| Thailand  | $6.8 \times 10^7$       |
| Nigeria   | $1.9 \times 10^8$       |
| Singapore | $5.7 \times 10^6$       |
| Egypt     | $9.3 \times 10^7$       |

- (a) Write  $9.3 \times 10^7$  as an ordinary number.

.....  
(1)

- (b) Which of these countries had the least population?

.....  
(1)

The population of China was  $1.382 \times 10^9$  in April 2016.

The population of India was  $1.327 \times 10^9$  in April 2016.

- (c) Work out the difference between the population of China and the population of India in April 2016.

Give your answer in standard form.

.....  
(2)

**(Total for Question 21 is 4 marks)**

22 (a) Solve  $7x + 2y = 16$   
 $5x - 2y = 20$

Show clear algebraic working.

$x = \dots\dots\dots$

$y = \dots\dots\dots$   
**(3)**

(b) Expand and simplify  $(k + 9)(k - 5)$

$\dots\dots\dots$   
**(2)**

**(Total for Question 22 is 5 marks)**

---

---

**TOTAL FOR PAPER: 100 MARKS**