Write your name here

Surname	Other names

Pearson Edexcel International GCSE

Centre Number | | | | | |

Candidate Number | | | | |

Mathematics A

Paper 1F



Foundation Tier

Thursday 24 May 2018 – Morning
Time: 2 hours

Paper Reference
4MA0/1F

You must have:
Ruler graduated in centimetres and millimetres, protractor, compasses, 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.

Turn over ▶

P53341A

©2018 Pearson Education Ltd.

1/1/

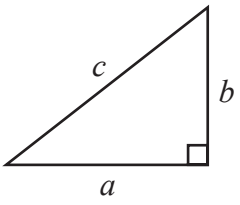
P 5 3 3 4 1 A 0 1 2 4

Pearson

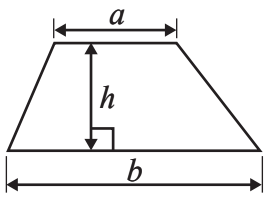
International GCSE MATHEMATICS

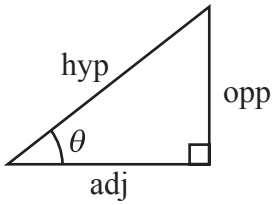
FORMULAE SHEET – FOUNDATION TIER

Pythagoras' Theorem
$a^2 + b^2 = c^2$



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





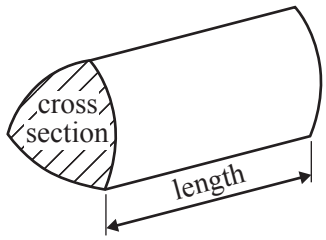
adj = hyp × cos θ
opp = hyp × sin θ
opp = adj × tan θ

or $\sin\theta = \frac{\text{opp}}{\text{hyp}}$

$\cos\theta = \frac{\text{adj}}{\text{hyp}}$

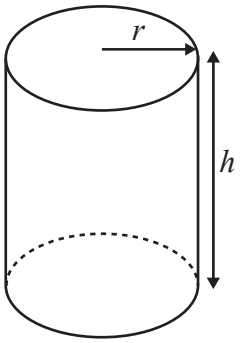
$\tan\theta = \frac{\text{opp}}{\text{adj}}$

Volume of prism = area of cross section × length



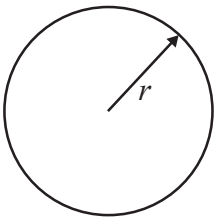
Circumference of circle = $2\pi r$

Area of circle = πr^2



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

Curved surface area of cylinder = $2\pi rh$



DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

Answer ALL TWENTY questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

1 (a) Write these numbers in order of size.
Start with the smallest number.

-7 3 -5 -9 0 1

.....

(1)

(b) Write these numbers in order of size.
Start with the smallest number.

0.078 0.7 0.87 0.08 0.707

.....

(1)

(c) Write 0.017 as a fraction.

.....

(1)

(d) Write 0.6 as a percentage.

.....%

(1)

(e) Which **one** of the following fractions is equivalent to $\frac{2}{3}$?

$\frac{10}{12}$ $\frac{3}{6}$ $\frac{10}{18}$ $\frac{12}{18}$ $\frac{9}{12}$

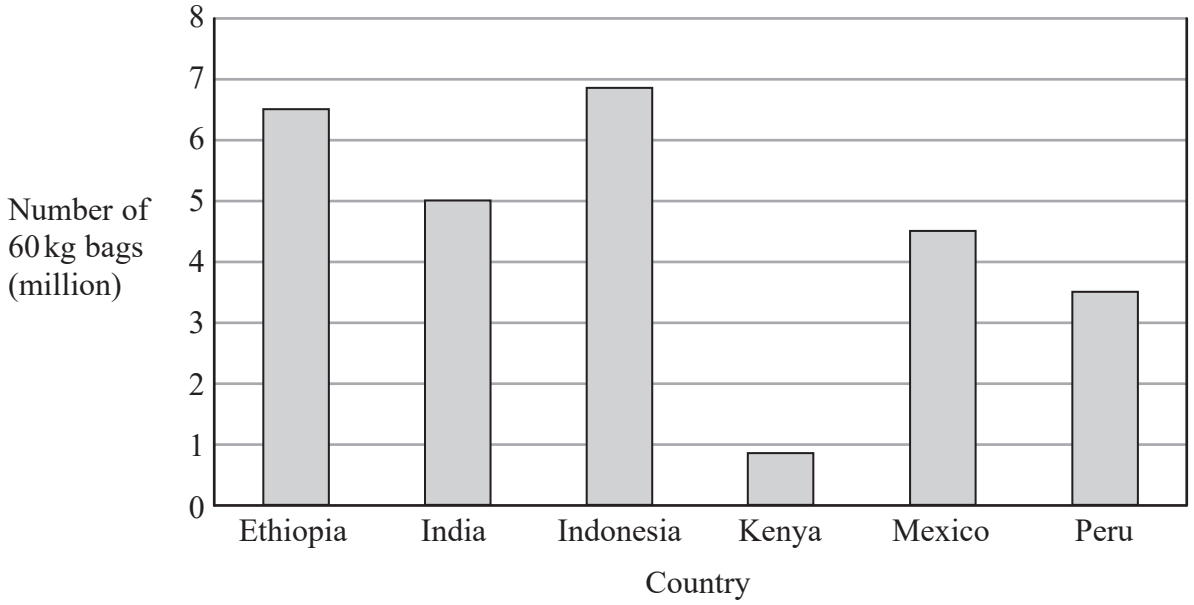
.....

(1)

(Total for Question 1 is 5 marks)

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

2 The bar chart shows the number of 60 kg bags of coffee produced by each of six countries in 2014



(a) Which of these countries produced the greatest number of 60 kg bags of coffee in 2014?

.....

(1)

(b) Find the number of 60 kg bags of coffee produced by India in 2014

.....million

(1)

(c) Which of these countries produced 4.5 million 60 kg bags of coffee in 2014?

.....

(1)

The number of 60 kg bags of coffee produced by Kenya in 2014 was 0.85 million.

(d) Work out the total weight of this coffee.
Give your answer in tonnes.

.....tonnes

(3)

(Total for Question 2 is 6 marks)

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

3 (a) Write the number 45.621 correct to the nearest whole number.

.....

(1)

(b) Write the number 6739 correct to the nearest hundred.

.....

(1)

(c) Find the number that is exactly half way between 5.2 and 5.5

.....

(2)

(d) Work out 45% of 800

.....

(2)

(e) Work out $\frac{3}{8}$ of 240 kg.

..... kg

(2)

384 of the 403 people on a plane are passengers.
The rest of the people on the plane are crew.

(f) What fraction of the people on the plane are crew?

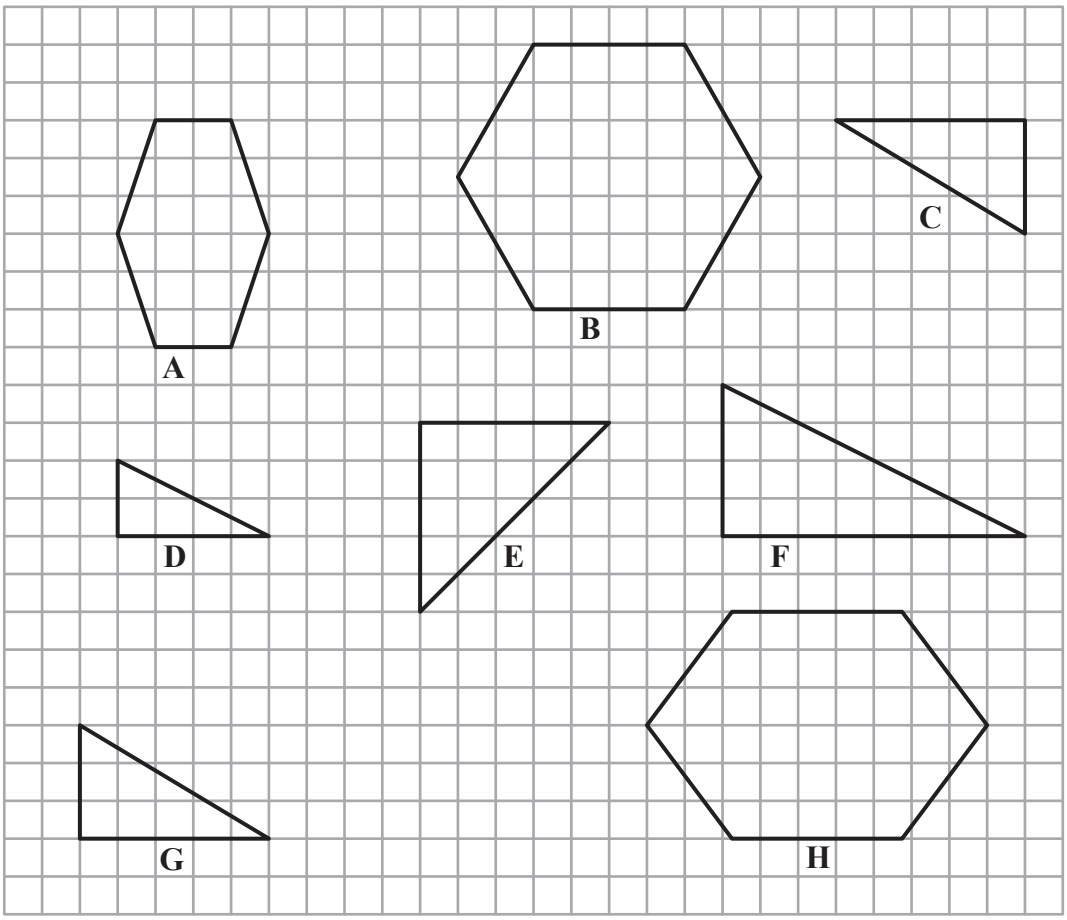
.....

(2)

(Total for Question 3 is 10 marks)

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

4 Here are eight shapes drawn on a grid of squares.



Shape **A** is a polygon.

(a) What is the mathematical name of this polygon?

.....

(1)

Shape **B** is a regular polygon.

(b) Explain what this tells you about shape **B**.

.....

.....

(1)

Two of the shapes have exactly 2 lines of symmetry.

(c) Write down the letters of these two shapes.

..... and .....

(2)

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

One of the shapes is congruent to shape **G**.

(d) Write down the letter of this shape.

.....

(1)

One of the shapes is similar to shape **F**.

(e) Write down the letter of this shape.

.....

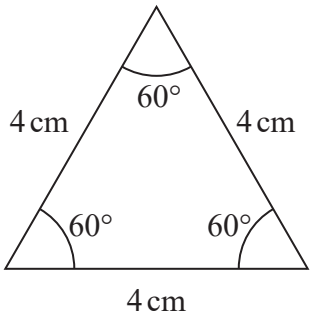
(1)

(f) How many lines of symmetry has shape **E**?

.....

(1)

Here is an equilateral triangle.



The equilateral triangle is going to be enlarged by scale factor 2

For the enlarged triangle, write down

(g) (i) the length of each side,

.....cm

(ii) the size of each angle.

.....°

(2)

(Total for Question 4 is 9 marks)

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

5 Here are the first five terms of a number sequence.

3 6 12 24 48

(a) (i) Write down the next term of the sequence.

.....

(ii) Explain how you found your answer.

.....

.....

(2)

The 20th term of the sequence is 1 572 864

(b) Find the 19th term of the sequence.

.....

(2)

Kaz says that 7 962 622 is a term of this sequence.
Kaz is wrong.

(c) Explain why.

.....

.....

.....

(1)

(Total for Question 5 is 5 marks)

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

6 Here is the number of goals scored by a hockey team in each of 10 games.

4 2 1 2 1 3 2 6 4 3

(a) Work out the range.

.....

(2)

(b) Work out the median.

.....

(2)

(c) Work out the mean.

.....

(2)

(Total for Question 6 is 6 marks)

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

7 (a) Solve $6t = 30$

$t =$ .....

(1)

(b) Solve $m + 8 = -3$

$m =$ .....

(1)

(c) Simplify $12x - 7y - 5x + 2y$

.....

(2)

(d) Solve $5g - 2 = 1$

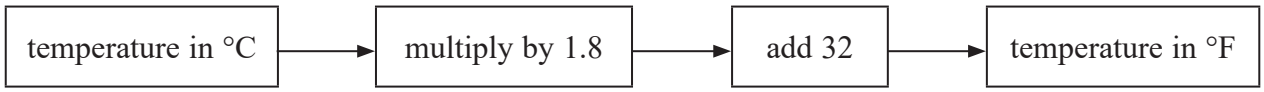
$g =$ .....

(2)

(Total for Question 7 is 6 marks)

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

8 You can use this rule to change temperatures from °C to °F.



Change −20 °C to °F.

.....°F

(Total for Question 8 is 3 marks)

9 Bhavin buys some presents at an airport in Kenya.
The total cost of the presents is 9450 Kenyan Shillings (KES).

Bhavin has one 500 KES note.
He pays 500 KES using this note and pays the rest of the cost in euros.

1 euro = 113 KES

Work out how many euros Bhavin pays.
Give your answer correct to the nearest whole number.

.....euros

(Total for Question 9 is 3 marks)

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

10 The diagram shows a quadrilateral.

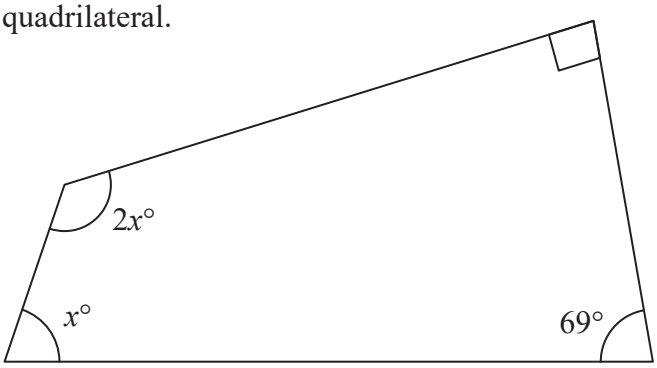


Diagram **NOT** accurately drawn

Work out the value of x.

.....

(Total for Question 10 is 3 marks)

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

11

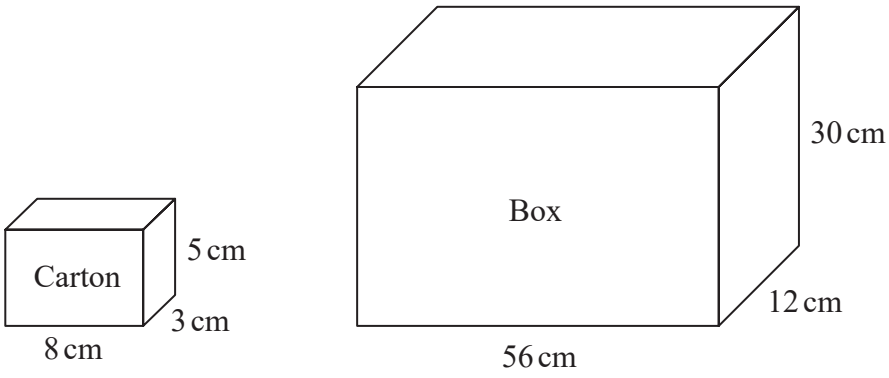


Diagram **NOT** accurately drawn

Suha is packing cartons into boxes.

Each carton measures 8 cm by 3 cm by 5 cm.
Each box measures 56 cm by 12 cm by 30 cm.

Suha has 400 cartons.

Work out the smallest number of boxes she needs to pack all these cartons.

.....

(Total for Question 11 is 4 marks)

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

12 (a) Work out the value of $\dfrac{56^2 + \sqrt{983}}{42.6 - 28.9}$

Write down all the figures on your calculator display.

.....

(2)

(b) Give your answer to part (a) correct to 2 significant figures.

.....

(1)

(Total for Question 12 is 3 marks)

---

13 The total cost of 8 calculators of the same type is £62.80

Work out the cost of 12 of these calculators.

£.....

(Total for Question 13 is 2 marks)

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

14 Steve goes on a cycle ride.
He cycles a distance of 40 km in 2 hours 15 minutes.

(a) Work out his average speed in kilometres per hour.
Give your answer correct to the nearest whole number.

.....km/h
(3)

Steve's salary is $28 500
He gets a salary increase of 2.4%

(b) Work out Steve's salary after the increase.

$.....
(3)

Nalini gets a salary increase of 3%
Her salary increase is $702

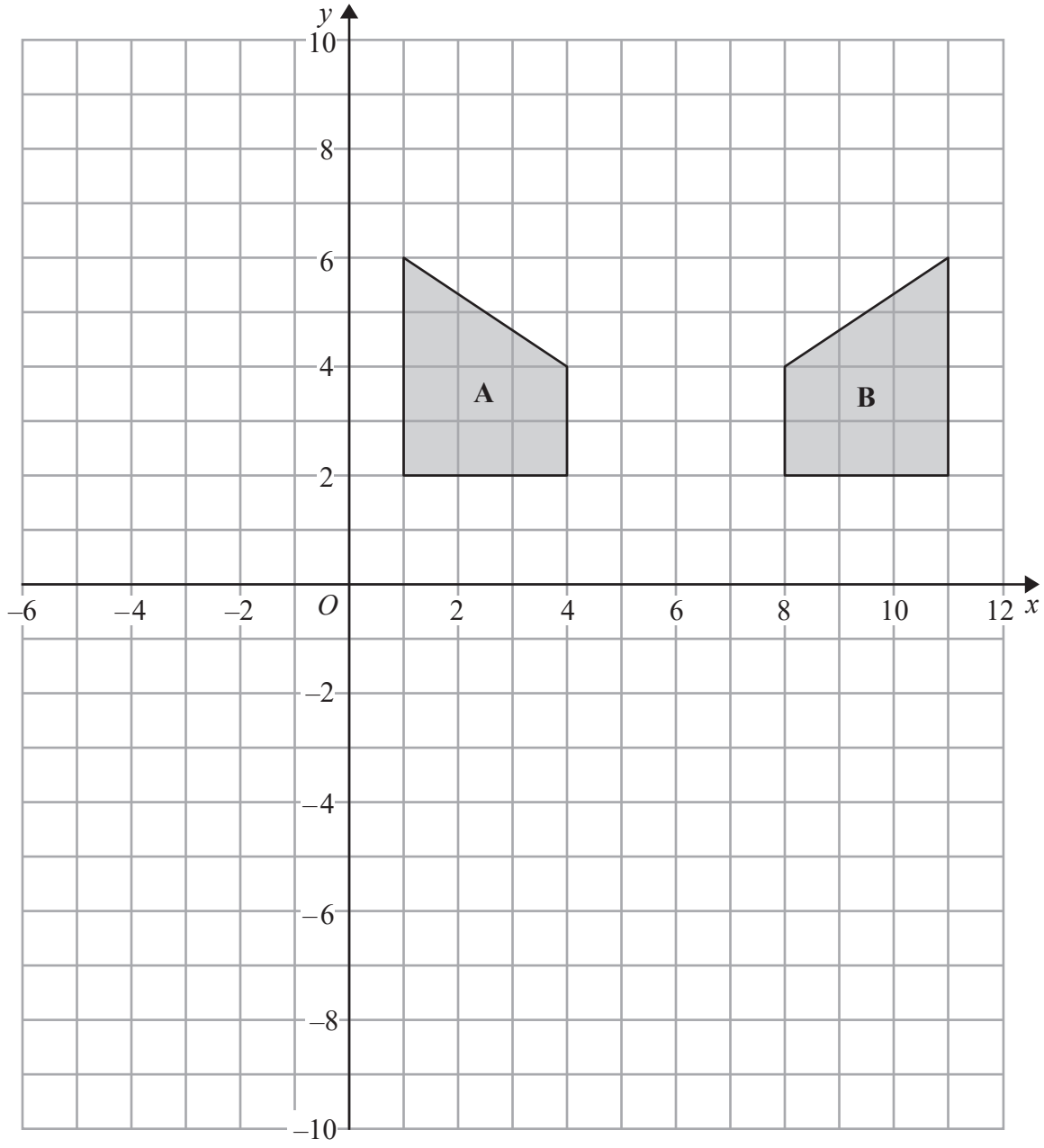
(c) Work out Nalini's salary before the increase.

$.....
(3)

(Total for Question 14 is 9 marks)

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

15



(a) Describe fully the single transformation that maps shape **A** onto shape **B**.

.....

.....

(2)

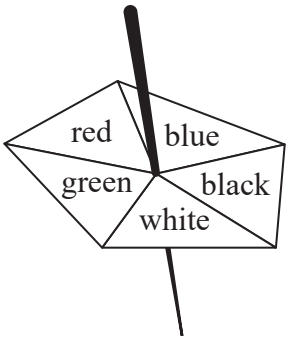
(b) On the grid, rotate shape **A** 180° about (4, 0)

(2)

(Total for Question 15 is 4 marks)

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

16 Here is a biased 5-sided spinner.



Jack spins the spinner once.

The table shows information about the probabilities that the spinner lands on red, on blue, on black, on white or on green.

Colour	red	blue	black	white	green
Probability	x	$2x$	$3x$	x	x

(a) Work out the probability that the spinner lands on red.

.....

(3)

Malia spins the spinner 200 times.

(b) Work out an estimate for the number of times the spinner lands on black.

.....

(2)

(Total for Question 16 is 5 marks)

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

17 (a) Factorise $m^2 + 7m$

.....

(1)

(b) Solve $7(x + 3) = 5x - 4$
Show clear algebraic working.

$x =$ .....

(3)

(c) Expand and simplify $(y + 9)(y - 4)$

.....

(2)

(Total for Question 17 is 6 marks)

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

18

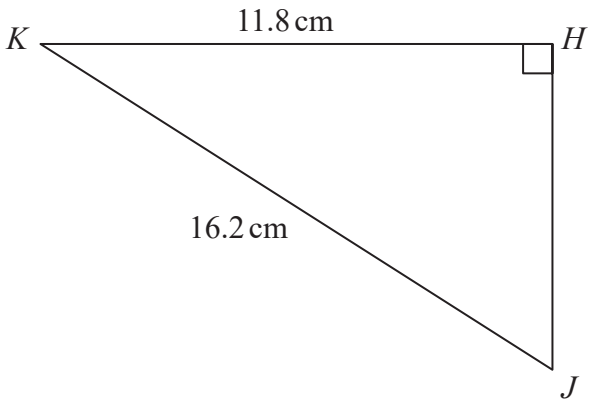


Diagram **NOT** accurately drawn

Calculate the length of *HJ*.
Give your answer correct to 3 significant figures.

.....cm

(Total for Question 18 is 3 marks)

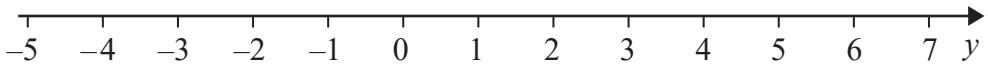
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

19 (a) Solve the inequalities $-3 < x + 4 < 9$

.....

(2)

(b) On the number line, represent $-2 < y \leqslant 5$



(2)

(Total for Question 19 is 4 marks)

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

20 The table shows information about the weights of 60 apples.

Weight (w grams)	Frequency
$160 < w \leqslant 164$	12
$164 < w \leqslant 168$	20
$168 < w \leqslant 172$	14
$172 < w \leqslant 176$	7
$176 < w \leqslant 180$	4
$180 < w \leqslant 184$	3

(a) Write down the modal class.

.....grams

(1)

(b) Work out an estimate for the total weight of the 60 apples.

.....grams

(3)

(Total for Question 20 is 4 marks)

TOTAL FOR PAPER IS 100 MARKS

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

BLANK PAGE

Do NOT write on this page.

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

BLANK PAGE

Do NOT write on this page.

BLANK PAGE

Do NOT write on this page.

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA