



Cambridge International General Certificate of Secondary Education (9–1)

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0626/01

May/June 2017

1 hour

Additional Materials: Geometrical instruments
Tracing paper (optional)

READ THESE INSTRUCTIONS FIRST

DO **NOT** WRITE IN ANY BARCODES.

For π , use either your calculator value or 3.142.

The total of the marks for this paper is 60.

This syllabus is regulated for use in England as a Cambridge International Level 1/Level 2 (9–1) Certificate.

This document consists of **12** printed pages.

- 1 Work out $\frac{3}{8}$ of 1232.

..... [1]

- 2 Here are the times, in minutes, it takes 5 children to walk to school.

23 15 17 31 28

Find the range of these times.

..... minutes [1]

3

SALE
15% off all stock

A shirt costs £19.99 before the sale.

A shop assistant calculates the sale price.

$$0.85 \times 19.99 = 16.9915$$

Write down the sale price of the shirt.

£ [1]

- 4 Write down all the prime numbers between 14 and 20.

..... [1]

- 5 Write the following in order of size, smallest first.

0.18

 $\frac{1}{8}$

8.1%

 0.3^2

..... [2]
smallest

- 6 Calculate.

$$\frac{\sqrt{10}}{2.4^3}$$

Give your answer correct to 3 decimal places.

..... [2]

- 7 Here is a list of numbers.

5

16

27

64

111

175

205

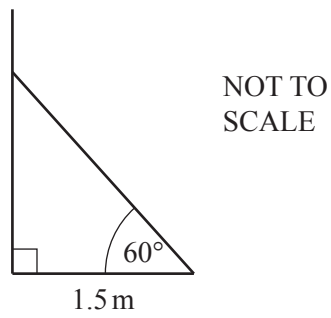
- (a) Write down the number from the list that is both a square number and a cube number.

..... [1]

- (b) Write down the number from the list that is a multiple of 25.

..... [1]

- 8 The diagram shows a ladder, on horizontal ground, leaning against a vertical wall.



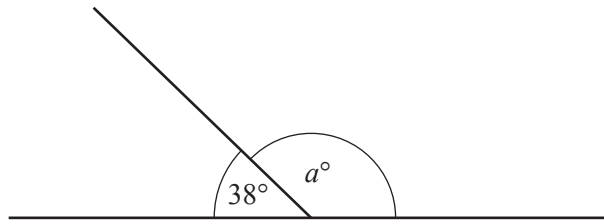
Using a ruler and protractor, make a scale drawing of the ladder, the ground and the wall.
 Use a scale of 1 cm to represent 0.5 m.
 The wall has been drawn for you.

wall

Scale: 1 cm to 0.5 m

[2]

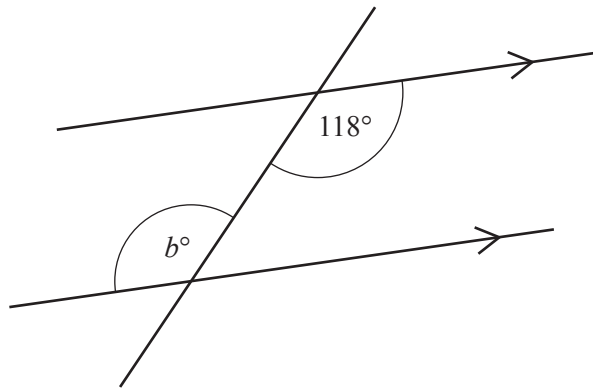
9 (a)

NOT TO
SCALE

Work out the value of a .
Give a reason for your answer.

$a = \dots\dots\dots$ because $\dots\dots\dots$
 $\dots\dots\dots$ [2]

(b)

NOT TO
SCALE

Complete this statement with a reason.

$b = 118$ because $\dots\dots\dots$ [1]

- 10 In a college, 573 of the 5300 students are left-handed.
384 of the 3200 **male** students are left-handed.

Show that 9% of the **female** students are left-handed.

[2]

- 11 Paula changes €800 into pounds (£) when the exchange rate is £1 = €1.41.

How much does Paula receive?

Give your answer in pounds, correct to the nearest penny.

£ [2]

- 12 (a) Mark's basic pay rate is £ h per hour.
When Mark works overtime, he earns one and a half times his basic pay rate.
One week, Mark works for 37 hours at his basic pay rate and 8 hours of overtime.

Find and simplify an expression, in terms of h , for the total amount Mark earns this week.

£ [2]

- (b) Salma's basic pay rate is £3 per hour more than Mark's basic pay rate.
Her overtime rate is double her basic pay rate.
One week, Salma works for 30 hours at her basic pay rate and 2 hours of overtime.

Show that Salma earns a total of £ $(34h + 102)$ this week.

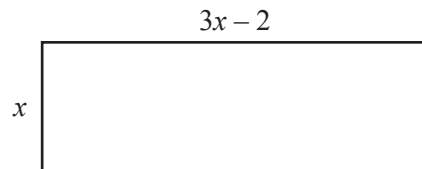
[2]

- 13** Jacob buys 2 litres of milk and 0.75 litres of water.
He pays £1.76 in total.
The water costs £1.12 per litre.

How much does the milk cost per litre?

£ [3]

- 14** In this question all lengths are in centimetres.



NOT TO
SCALE

The perimeter of this rectangle is 122 cm.

Calculate the value of x .

$x =$ [3]

- 15 (a) Erin saved £860 at a rate of 8% per year **simple** interest.

Calculate the amount Erin had after 3 years.

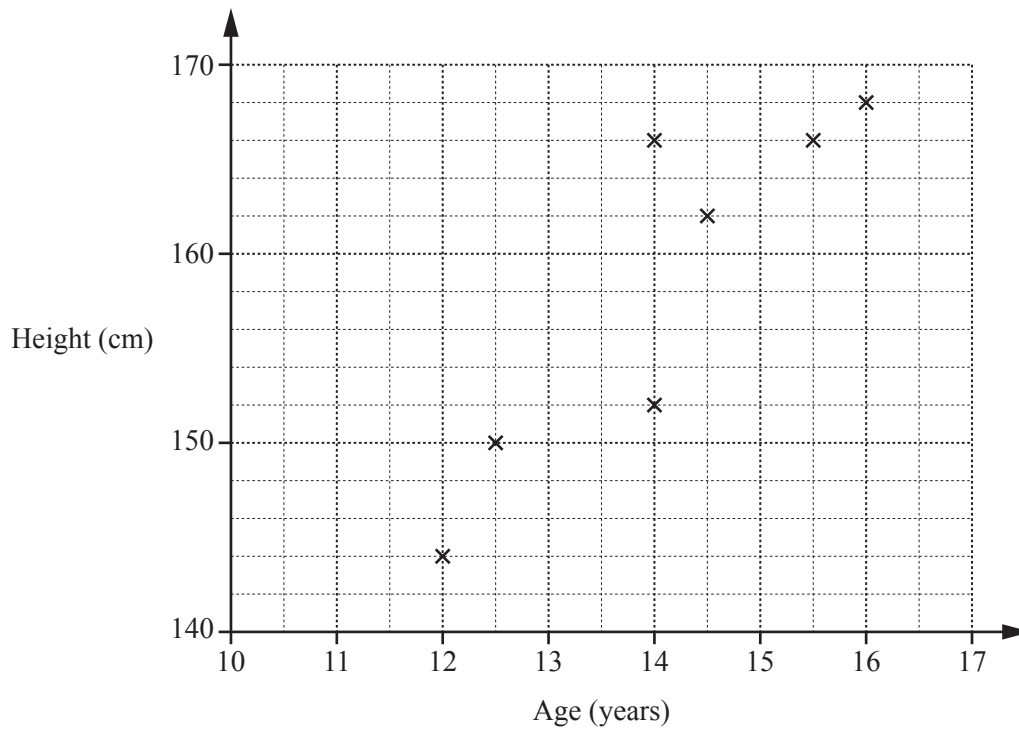
£ [3]

- (b) Tasnia invested £1700 at a rate of 6% per year **compound** interest.

Calculate the amount Tasnia had after 2 years.

£ [2]

- 16 The scatter diagram shows the age and height of some girls in a sports team.



- (a) Draw a line of best fit on the scatter diagram. [1]

- (b) Use your line of best fit to estimate the height of a 13-year-old girl.

..... cm [1]

- (c) Harry says:

Using the scatter diagram, I estimate that the height of a 24-year-old woman is about 288 cm.

Harry has used the data in the scatter diagram incorrectly.

- (i) Explain how Harry has used the scatter diagram to make his estimation.

..... [1]

- (ii) Explain why Harry should not have used the scatter diagram to make his estimation.

..... [1]

- 17 The table shows the relative frequency of the medals awarded in a national mathematics competition.

Medal	None	Bronze	Silver	Gold
Relative frequency	0.35	0.4		0.1

- (a) Complete the table. [2]

- (b) 120 students from one school entered the competition.

Work out the expected number of bronze medals awarded to these students.

..... [1]

- 18 Simplify.

(a) $m^0 \times m^3$

..... [1]

(b) $(y^4)^{-2}$

..... [1]

(c) $\frac{3x^6y^4}{21x}$

..... [2]

19 The length, l metres, of a piece of rope is 13.2 metres correct to 1 decimal place.

(a) Complete the following statement about l .

$$\dots\dots\dots \leq l < \dots\dots\dots [2]$$

(b) A water wheel has radius 2.1 metres.

Show that the rope may not be long enough to fit around the circumference of the wheel.

[3]

20 The number 2017 can be written as the sum of two square numbers.
One of the square numbers is less than 100.

Complete the sum.

$$2017 = \dots\dots\dots + \dots\dots\dots [2]$$

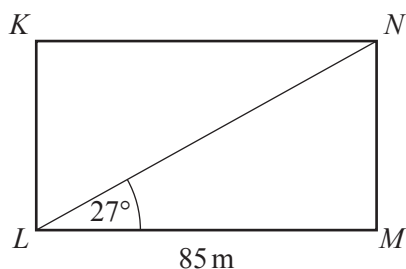
Questions 21 and 22 are printed on the next page.

21 Expand and simplify.

$$(x + 5)(x - 7)$$

..... [2]

22



NOT TO
SCALE

The diagram shows a rectangle $KLMN$.

(a) Calculate LN .

$LN =$ m [3]

(b) Calculate the shortest distance from M to the line LN .

..... m [3]

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