

Please write clearly in block capitals.

Centre number

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Candidate number

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Surname

Forename(s)

Candidate signature

GCSE MATHEMATICS

Grades 3-4

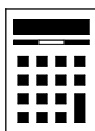
Calculator Test 1

Time allowed: 1 hour

Materials

For this paper you must have:

- a calculator
- mathematical instruments.



Instructions

- Use black ink or black ball-point pen. Draw diagrams in pencil.
- Answer **all** questions.
- You must answer the questions in the spaces provided. Do not write outside the box around each page or on blank pages.
- Do all rough work in this book. Cross through any work you do not want to be marked.

Information

- The marks for questions are shown in brackets.
- The maximum mark for this paper is 46.
- You may ask for more answer paper, graph paper and tracing paper. These must be tagged securely to this answer book.

Advice

- In all calculations, show clearly how you work out your answer.

For Examiner's Use	
Pages	Mark
2-3	
4-5	
6-7	
8-9	
10-11	
12-13	
14-15	
TOTAL	

Answer **all** questions in the spaces provided

- 1** A school play takes place each day from Monday to Friday.
Here are the attendances on four of the days.

Monday	Tuesday	Wednesday	Thursday
72	83	88	97

For all **five** days, the mean attendance is 90

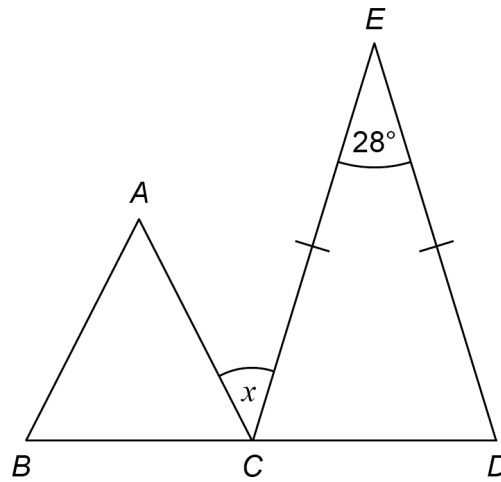
Work out the attendance on Friday.

[3 marks]

Answer _____



2

 BCD is a straight line.Triangle ABC is equilateral. $CE = DE$ Not drawn
accuratelyWork out the size of angle x .**[4 marks]**

Answer _____ degrees

3 Nihal has savings of £168

He uses $\frac{5}{7}$ of his savings to buy sports equipment.

Assume that he will use $\frac{1}{3}$ of the **rest** of the money to buy a shirt.

How much of his savings, in £, will he have left?

[3 marks]

Answer £ _____

4 The masses of some puppies were recorded.

The smallest mass was 7 kilograms 200 grams.

The range of the masses was 650 grams.

What was the **largest** mass?

Give your answer in kilograms and grams.

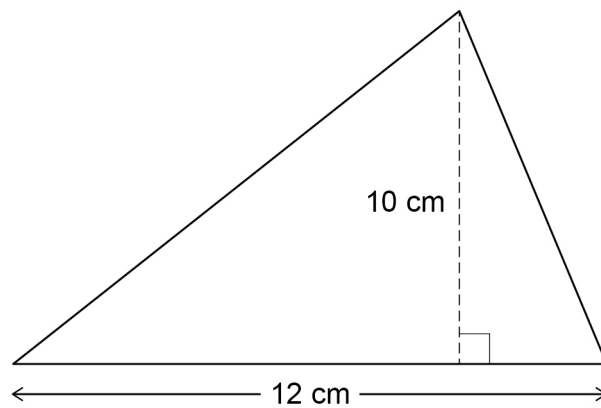
[2 marks]

Answer _____ kilograms _____ grams



5

A force of 180 newtons (N) is applied to the surface of this triangle.



Not drawn
accurately

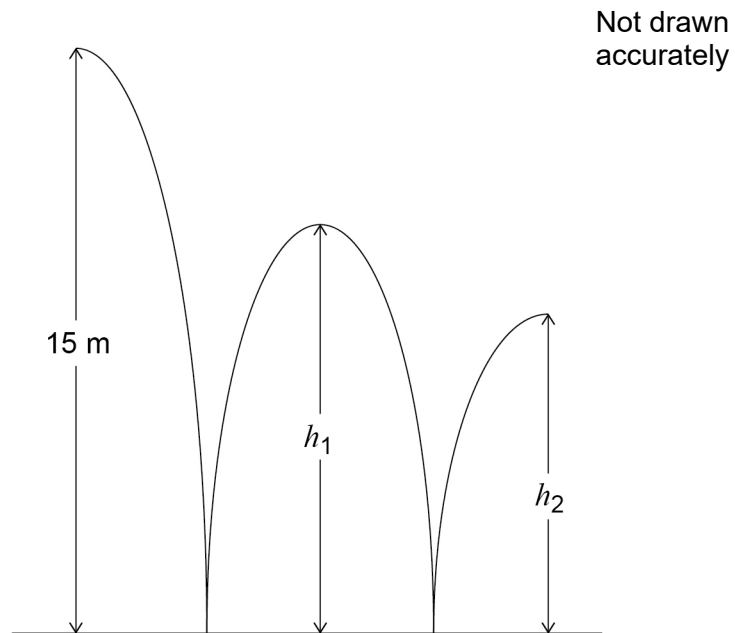
Work out the pressure.

Use $\text{pressure} = \frac{\text{force}}{\text{area}}$

[3 marks]

Answer _____ N/cm²

- 6** A ball is thrown from a height of 15 metres.
It bounces to height h_1 , then to height h_2 as shown.



h_1 is three quarters of the original height.

- 6 (a)** Jack expects h_2 to be three quarters of h_1

Work out the value of h_2 that he expects.

[2 marks]

Answer _____ metres

6 (b) In fact, h_2 is two thirds of h_1

How does this affect the answer to part (a)?

Tick a box.

☐

The ball bounced higher than he expected

☐

The ball bounced lower than he expected

Show working to support your answer.

[2 marks]



- 7 Here is a formula to convert degrees Celsius ($^{\circ}\text{C}$) to degrees Fahrenheit ($^{\circ}\text{F}$).

$$F = 1.8C + 32$$

F is the number of degrees Fahrenheit

C is the number of degrees Celsius

- 7 (a) Show that $-40^{\circ}\text{C} = -40^{\circ}\text{F}$

[2 marks]

- 7 (b) The temperature is -15°C

Nick says,

“Because the temperature is negative in Celsius, it **must** be negative in Fahrenheit.”

Is he correct?

You **must** show your working.

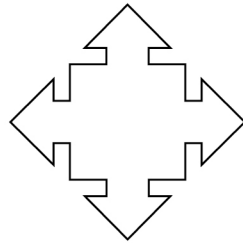
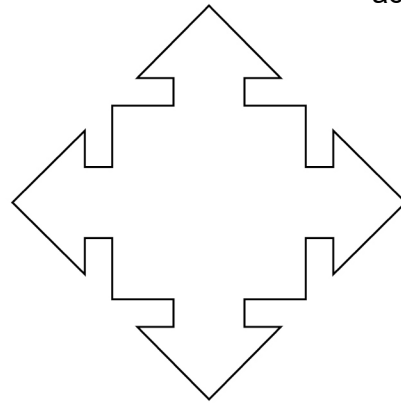
[1 mark]

Answer _____



8

Here are two similar shapes, A and B.

Not drawn
accurately**A****B**

length of edges in A : length of edges in B = 2 : 5

The perimeter of A is 210 mm

Work out the perimeter of B.

[2 marks]

Answer _____ mm



9 The people at a party are from Spain, France or Germany.

68% are from Spain

number from France = number from Germany

Work out number from Spain : number from France

Give your answer in the form $n : 1$

[3 marks]

Answer _____ : 1

10 A circle has radius 4.2 cm

Work out the length of the circumference.

Give your answer to 1 decimal place.

[3 marks]

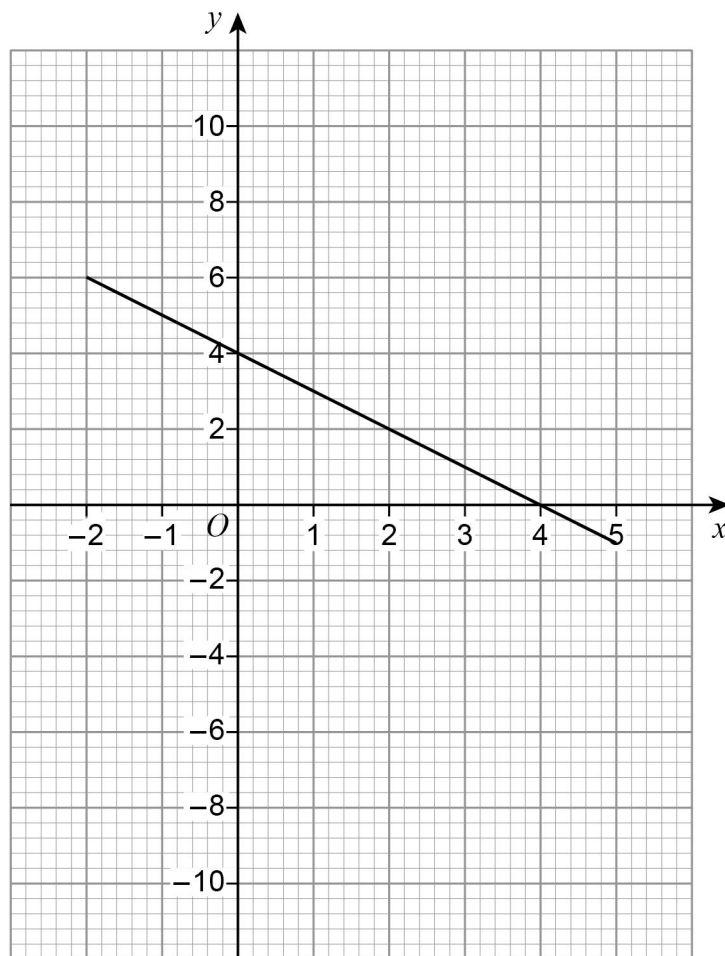
Answer _____ cm



11 The graph of $y = 4 - x$ for values of x from -2 to 5 is shown on the grid.

On the grid, draw the graph of $y = 2x - 5$ for values of x from -2 to 5

[3 marks]



12

In a sport, injury time is added time played at the end of a match.

The table shows the injury time, t (minutes) played in 380 matches.

Injury time, t (minutes)	Frequency
$0 < t \leq 2$	59
$2 < t \leq 4$	158
$4 < t \leq 6$	106
$6 < t \leq 8$	45
$8 < t \leq 10$	12

What percentage of the matches had **more than** 6 minutes of injury time?

[2 marks]

Answer _____ %



13

Rosie makes phone calls to try to sell broadband.

Today, she made 120 calls.

The table shows the results.

Result of call	Frequency
Not answered	33
Answered but sale not made	81
Answered and sale made	6

During the **rest of the week**, Rosie will make 500 calls.

Using the results in the table, how many sales does she expect to make during the **rest of the week**?

[2 marks]

Answer _____

14

Joe and Kyle share an amount of money in the ratio $7 : n$

Joe gets 35% of the money.

Work out the value of n .

[2 marks]

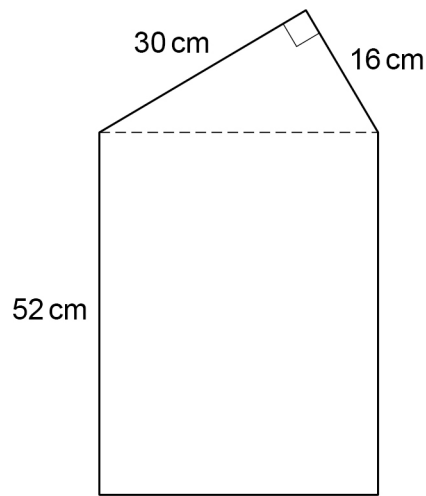
Answer _____

6

Turn over ►



- 15 A shape is made by joining a right-angled triangle to a rectangle.



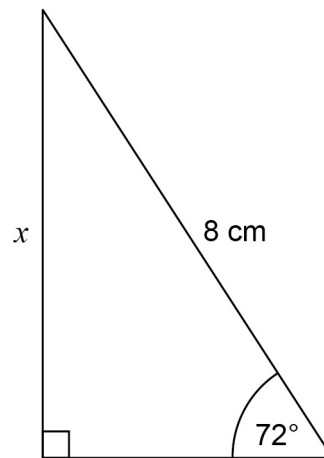
Not drawn
accurately

Work out the area of the shape.

[5 marks]

Answer _____ cm^2

16 Use trigonometry to work out the length x .



Not drawn
accurately

[2 marks]

Answer _____ cm

END OF QUESTIONS

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