

Name: _____

GCSE Foundation
Set A
Calculator Paper



Corbettmaths

Equipment

1. A blue or black ink ball-point pen.
2. A pencil.
3. An eraser.
4. A ruler.
5. A pair of compasses.
6. A protractor.
7. A calculator.

Guidance

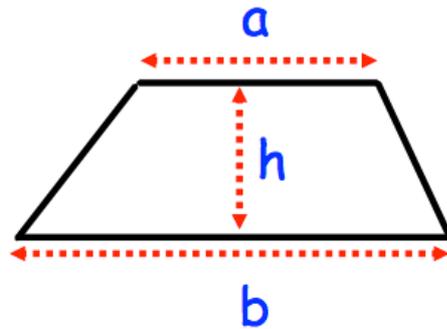
1. Read each question carefully before you begin answering it.
2. Don't spend too long on one question.
3. Attempt every question.
4. Check your answers seem right.
5. Always show your workings

Information

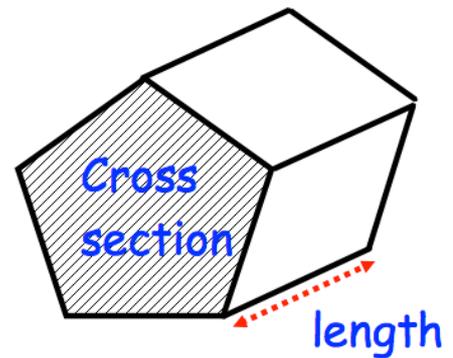
1. The maximum mark for this paper is 100.
2. The marks for questions are shown in brackets
3. You may ask for more lined, graph or tracing paper.

Question	Mark	Available
1		3
2		3
3		2
4		3
5		2
6		3
7		2
8		4
9		2
10		4
11		2
12		4
13		10
14		2
15		4
16		2
17		3
18		6
19		6
20		3
21		2
22		3
23		4
24		2
25		2
26		6
27		4
28		4
29		3
Total		100

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



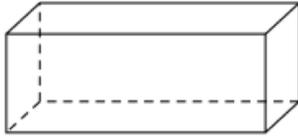
Volume of a prism = area of cross section x length



1. The names of five solid shapes are given.

triangular prism sphere cube cuboid cylinder

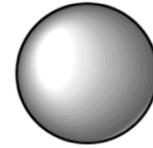
Three of them are drawn below.



A



B



C

Complete these statements.

Shape A is called a

Shape B is called a

Shape C is called a

(3)

2. Here is a list of numbers

8 9 10 11 14 20 27 32

From this list, write down

(a) a multiple of 7

.....
(1)

(b) a factor of 16

.....
(1)

(c) a prime number

.....
(1)

3. Write the number 9371

(a) to the nearest 10

.....
(1)

(a) to the nearest 100

.....
(1)

4. The table shows the populations of four towns.

Town	Coalville	Greentown	Milton	Leek
Population	4210	4116	4053	4161

(a) Put the towns in order, starting with the town with the lowest population.

.....
(2)

(b) Find the difference between the highest and lowest population.

.....
(1)

5. (a) Write the number 92003 in words.

.....
(1)

(b) Write the number five thousand and eighty two in figures

.....
(1)

6. Write down a sensible **metric** unit for each measurement.

(a) The weight of a woman.

.....

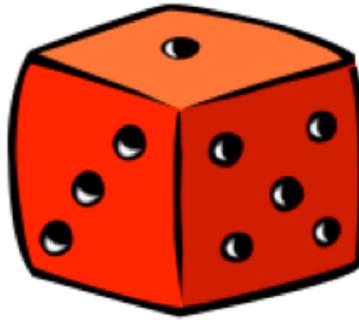
(b) The height of a school.

.....

(c) The distance between two cities.

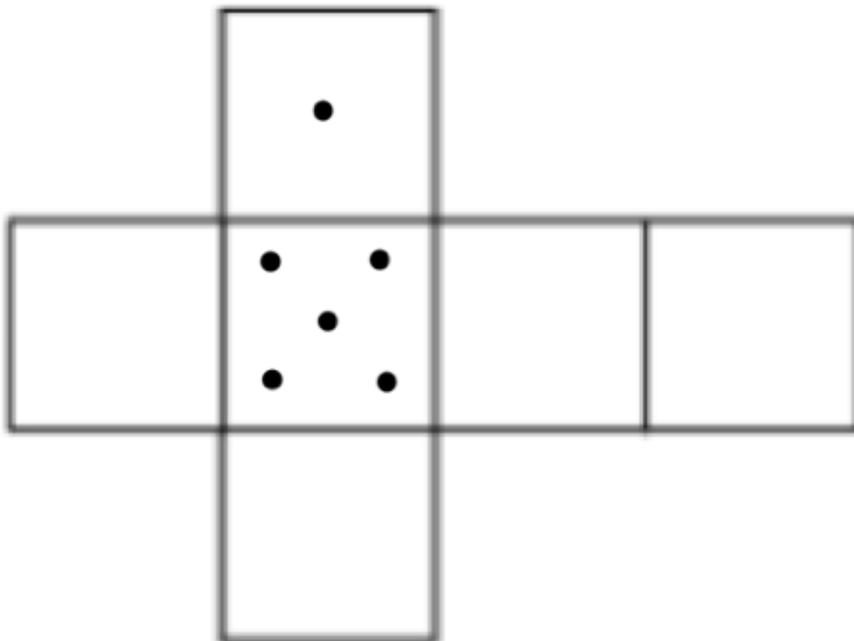
.....
(3)

7. Shown is the view of a dice.



The number of dots on the opposite faces add to 7.

Fill in the missing faces.



(2)

8. The cost of hiring a boat is given by the formula

$$\text{Cost in pounds} = \text{Number of days} \times 9 + 15$$

(a) Work out the cost in pounds of hiring a boat for 4 days.

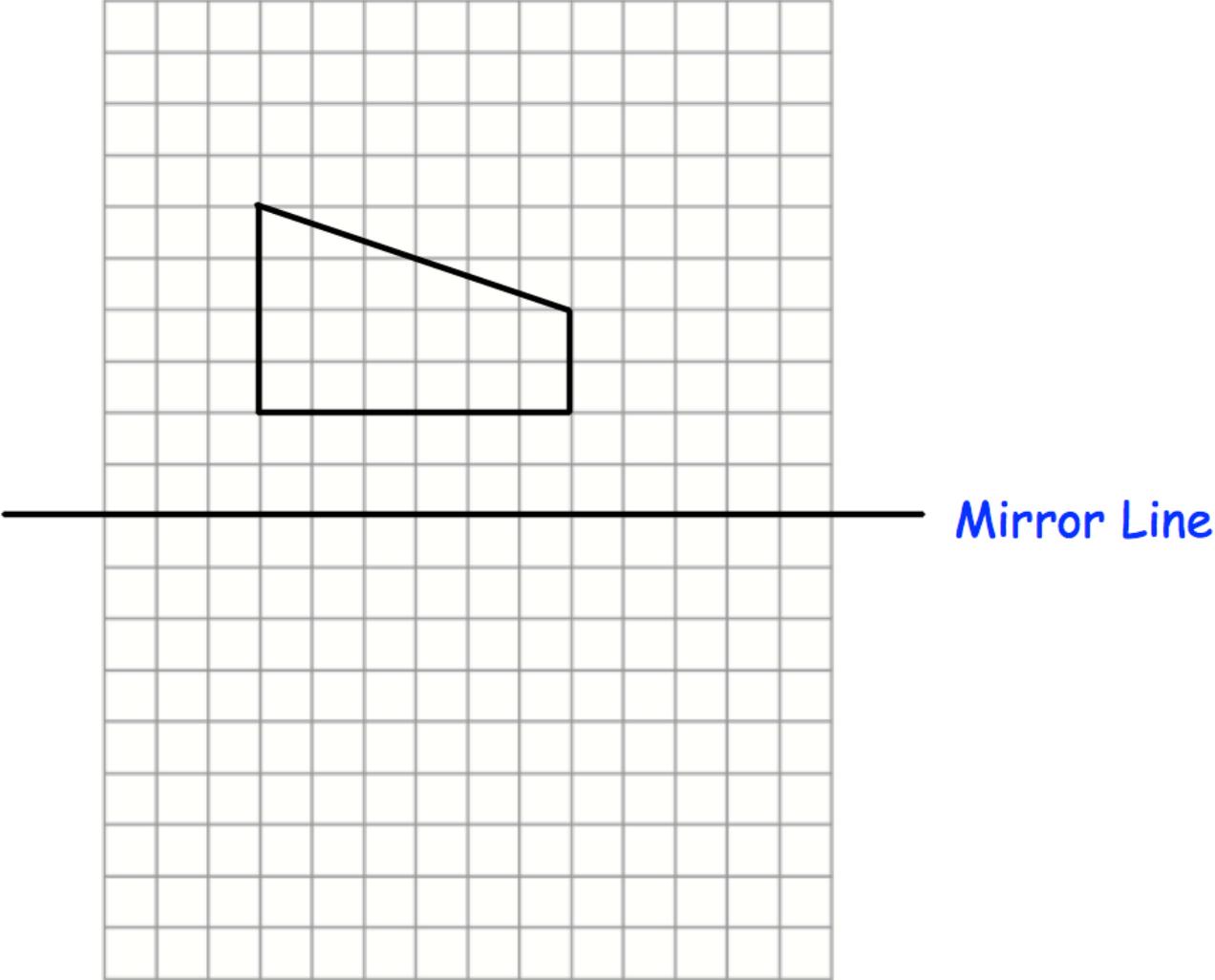
£.....
(2)

(b) Amir hires a boat.
The cost is £141.

For how many days does he hire the bicycle?

.....days
(2)

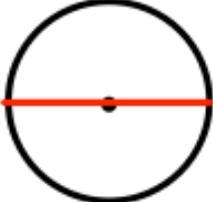
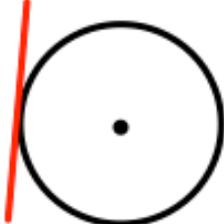
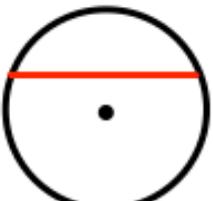
9. Reflect the shape in the mirror line.



(2)

10. Here are 6 diagrams and 6 labels.
In the diagram the centre of the circle is shown with a dot.

Match each diagram to its label.
One has been done for you.

Label	Diagram
Circle and radius	
Circle and segment	
Circle and arc	
Circle and diameter	
Circle and tangent	
Circle and chord	

11. Apples cost a pence each.
Bananas cost b pence each.

Write down an expression for the total cost, in pencil, of 3 apples and 5 bananas.

.....pence
(2)

12. Below is part of a customer's electricity bill.
Complete it to find the number of units of electricity used and the total cost.

Previous reading	48749
Present reading	49811
Number of units used	
Price per unit	42.5p
Total cost	£ _____

(4)

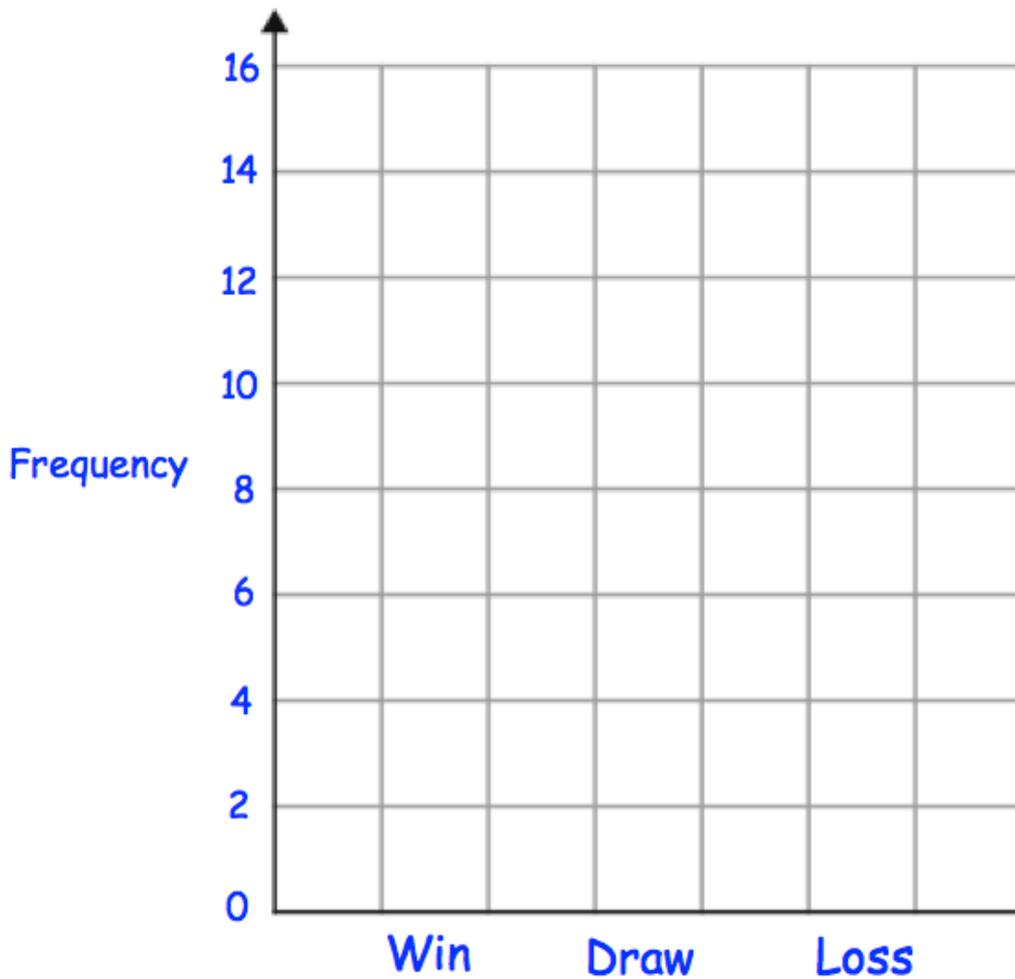
13. Cardiff Rovers Football Club played 30 games in a season.

(a) Complete the tally and frequency columns.

Result	Tally	Frequency
Win	//// // //	
Draw		
Loss	//// //	

(3)

(b) Draw a bar chart to show this information.



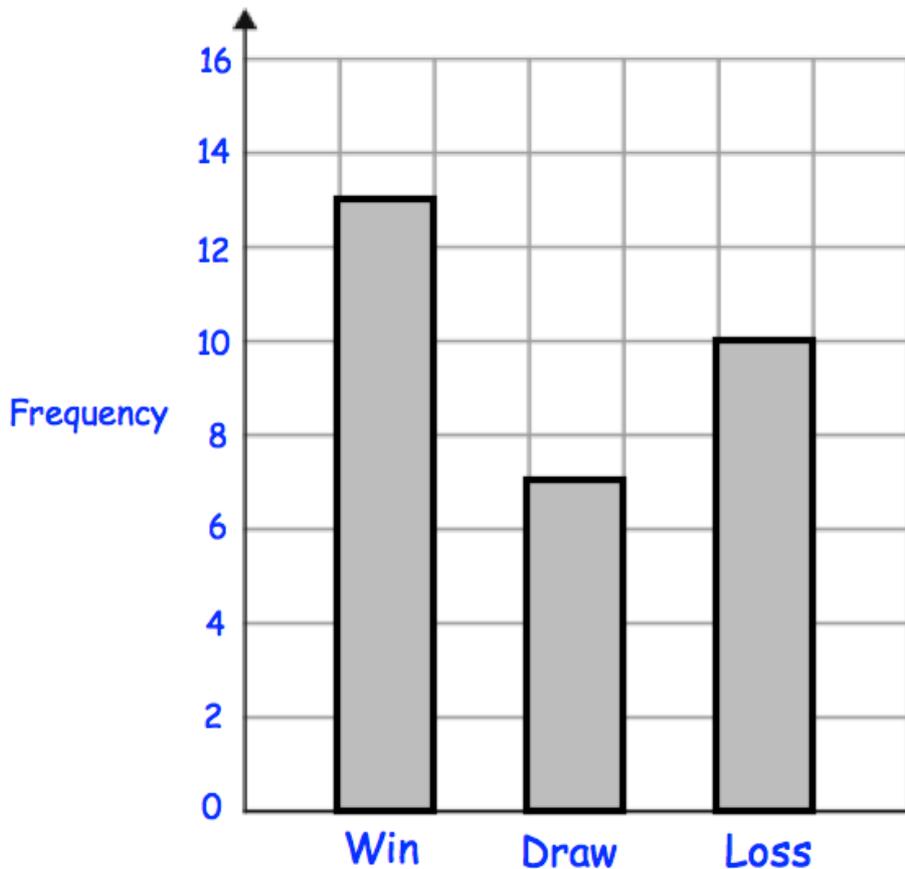
(2)

(c) What was the most common type of result for Cardiff Rovers?

.....
(1)

(d) Newport United Football Club play in the same league.

Their results in the same season are shown below.

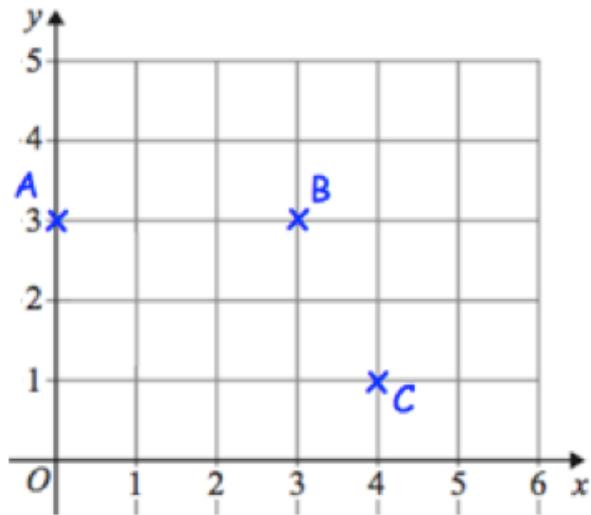


A win is worth 3 points.
A draw is worth 1 point.
A loss is worth 0 points.

Which club finished the season with more points and by how many?

..... by points
(4)

14.



ABCD is a parallelogram.

Complete the parallelogram and write down the coordinates of D.

(.....,)

(2)

15. A set of six numbers have a median of 5.
All of the numbers are even.
The range of the numbers is 6.
The mode of the numbers is 4.

Write down a possible set of six numbers.

.....,,,, and

(4)

16. A bag contains a blue counter (B), a red counter (R) and a yellow counter (Y).
A coin can land on heads (H) or tails (T).
A counter is chosen a random from the bag and the coin is flipped.

One of the possible outcomes is a blue counter and a head (BH).

List all the other possible outcomes.

Answer BH,

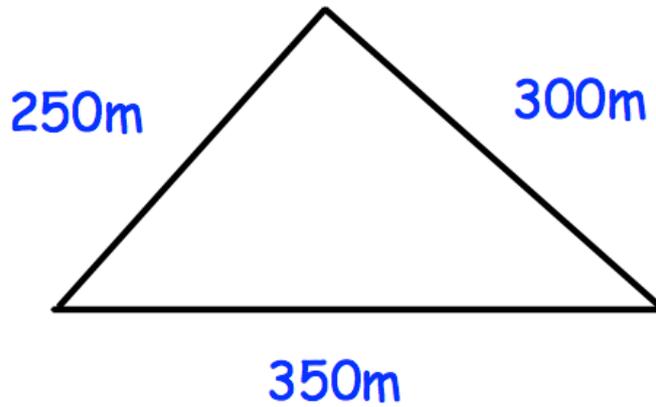
.....

.....

(2)

17. A triangular field is sketched below.
It has sides 250m, 300m and 350m.

Not drawn accurately



Draw the triangle accurately, using a scale of 1 cm to 50m.

18. Stephen needs 750kg of sand for his garden.
He can buy it from Store A or Store B.

Store A

One bag weighs 25kg and costs
£4.19 each.
Buy 4, get 1 free.
He takes the bags home in his van.

Store B

A single delivery weighing 750kg
normally costing £120.
20% discount.
Free delivery.

Which is the cheaper way of buying 750kg of sand and by how much?

Store by £.....

(6)

19. (a) Work out 5.2^2

.....
(1)

(b) Mary claims that when a number is squared, the answer is always larger.

Explain why Mary is wrong

.....
.....
.....
.....

(2)

(c) List all the cube numbers that are greater than 0 but less than 100.

.....
(2)

(d) Write down the cube root of 27

.....
(1)

20. A new table is priced at £360.
In a sale it is reduced by 35%.

Calculate the sale price.

£.....
(3)

21. Calculate

$$\frac{7.2}{9.1 \times 2.8}$$

- (a) Write down your full calculator display.

.....
(1)

- (b) Write your answer to 1 decimal place.

.....
(1)

22. (a) Simplify

$$m^5 \times m^3$$

.....
(1)

(b) Simplify

$$m^8 \div m^2$$

.....
(1)

(c) Simplify

$$(m^3)^2$$

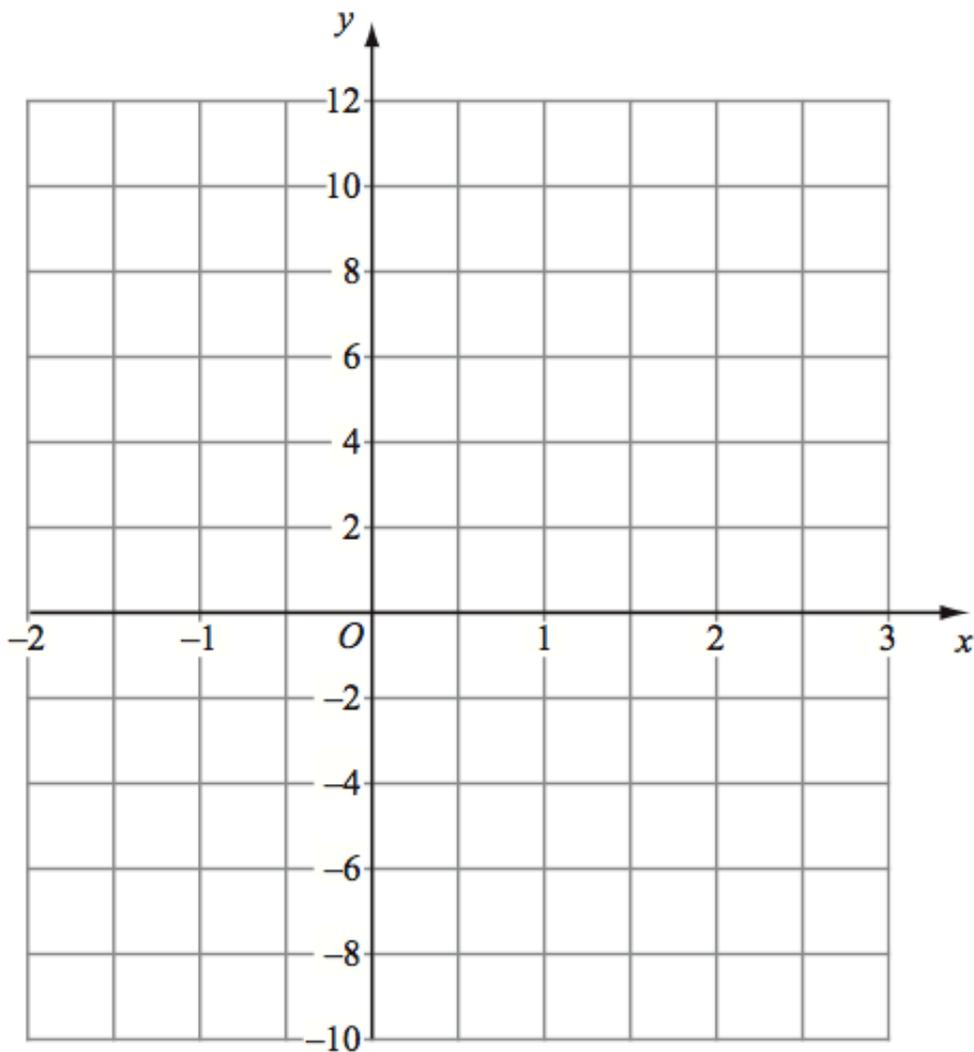
.....
(1)

23. (a) Complete the table of values for $y = 2x + 4$.

x	-1	0	1	2	3
y		4			10

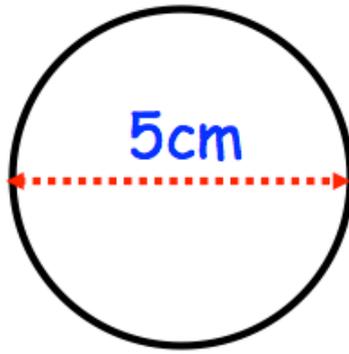
(2)

(b) On the grid, draw the graph of $y = 2x + 4$ for values of x from -1 to 3 .



(2)

24. Shown below is a circle with diameter 5cm.



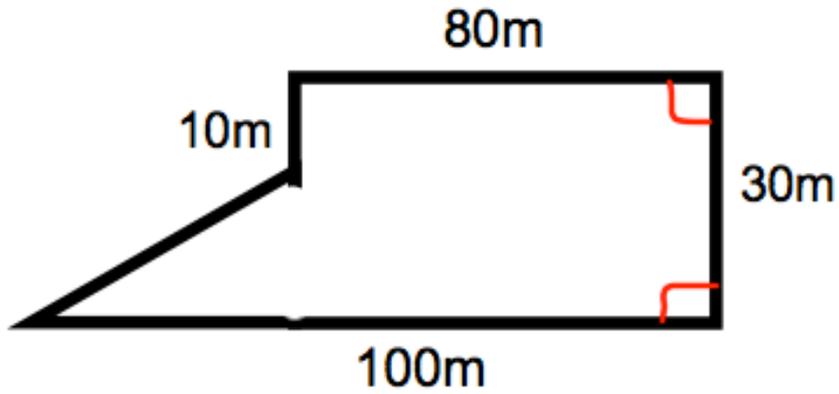
Calculate the circumference of the circle.
Give your answer to 1 decimal place.

.....cm
(2)

25. Expand and simplify $(w - 2)(w - 7)$

.....
(2)

26. The diagram below shows a farmer's field.



The farmer wants to plant a new crop.
Each sack of seed covers 30m^2 .
The cost of each sack is £6.

Work out the cost to buy enough seed to cover the field.

£.....
(6)

27. The equation

$$x^3 + 2x = 50$$

has a solution between 3 and 4.

Use trial and improvement to find this solution.
Give your answer correct to 1 decimal place.
You must show all your working.

$x = \dots\dots\dots$
(4)

28. The table below shows the length of 100 fish from a local river.

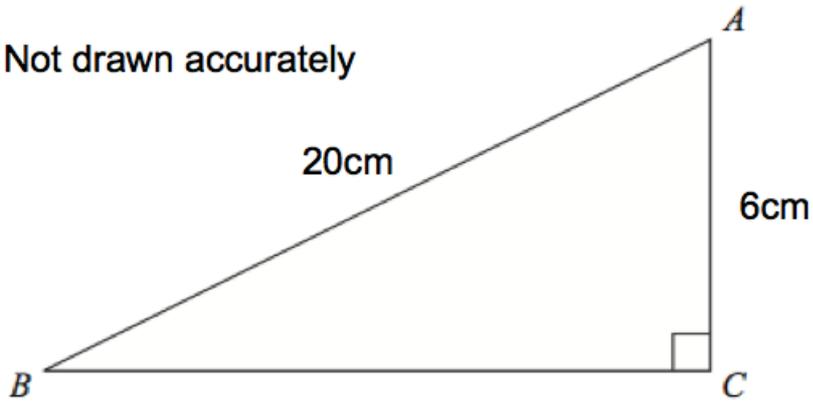
length, L, cm	Frequency	Midpoint	
$0 < L \leq 10$	21		
$10 < L \leq 20$	11		
$20 < L \leq 30$	31		
$30 < L \leq 40$	12		
$40 < L \leq 50$	25		

Calculate an estimate of the mean length of the fish.

.....cm
(4)

29.

Not drawn accurately



ABC is a right-angled triangle.

AC = 6cm.

AB = 20cm.

Calculate the length of BC.

Give your answer correct to 1 decimal place.

..... cm
(3)