Name:

GCSE Maths 2022
Edexcel Foundation Paper 1
Set A
Non-Calculator

Corbettmaths

Equipment

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

Guidance

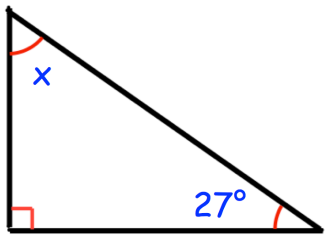
1. Read each question carefully.
2. Check your answers seem right.
3. Always show your workings

Information

1. This paper has been created based on topics in the Advance Information.
2. Also see Corbettmaths for the checklist for the entire GCSE as these topics may still be useful for Paper 1
3. There is one question per topic - this paper is designed to give an opportunity to practice each topic rather than replicate the actual paper.
4. The marks for questions are shown in brackets

GCSE 2022 Resources

1.



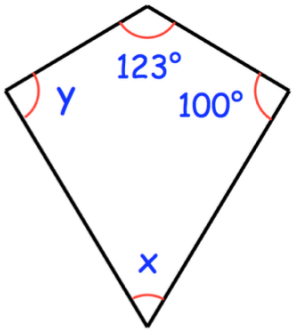
Find x

.....°

(2)

---

2. Shown below is a kite.



(a) Find x

.....°

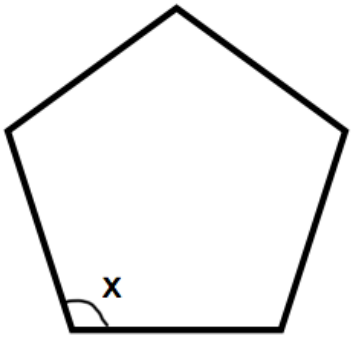
(1)

(b) Find y

.....°

(1)

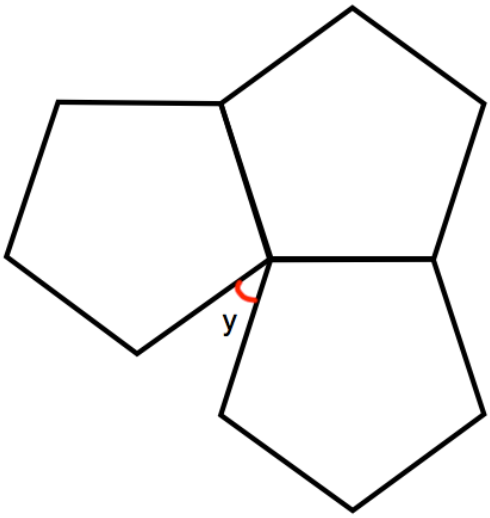
3. Shown below is a regular pentagon.



(a) Find the size of each interior angle.

x = ...^{0}

(2)



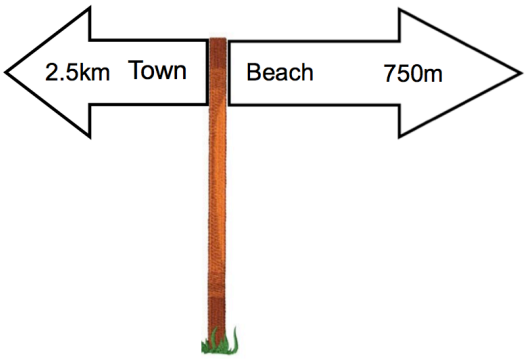
Three identical regular pentagons are joined as shown above.

(b) Work out the size of angle y.

y = ...^{0}

(2)

4.



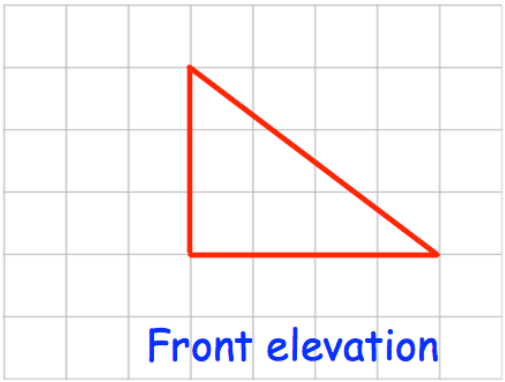
Work out the distance between the town and the beach.
State your units.

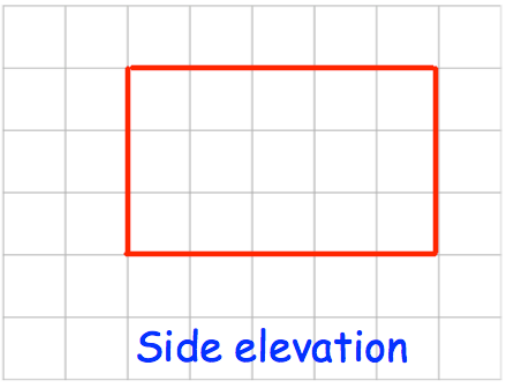
.....

(3)

---

5. Here are the front and side elevations of a solid shape.





On the grid, draw the plan view.

(2)

6. A car travels 210 kilometres in 3 hours 30 minutes

Calculate the average speed, in km/h, of the car.

.....km/h

(3)

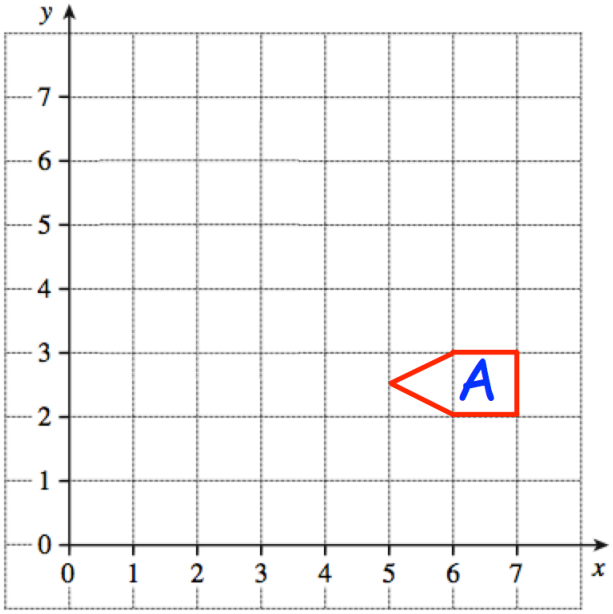
---

7. What is the volume of a piece of metal that has a mass of 300g and density of 6g/cm³?

.....cm³

(2)

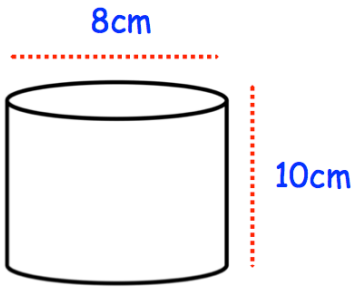
8.



Reflect shape A in the line x = 4
Label the new shape B.

(2)

9. Below is a cylinder with diameter 8cm and 10cm.



Find the volume of the cylinder.
Give your answer in terms of π

..... cm^3
(3)

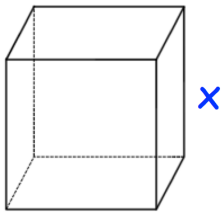
---

10. Write down the exact value of Sin 30°

.....
(1)

---

11. A cube is shown below.



The volume of the cube is $27cm^3$.
Find x.

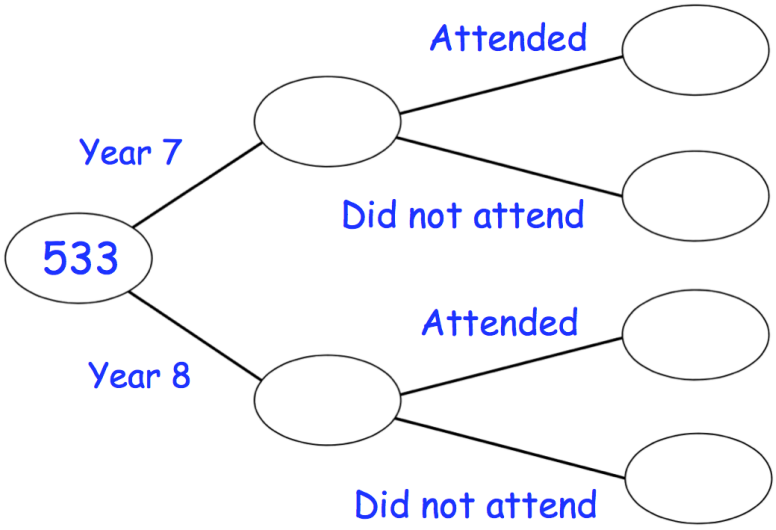
.....cm
(2)

12. In a secondary school, there are 533 students altogether in Years 7 and 8. There are 255 students in Year 8.

The PE department run football training after school on a Thursday for Year 7 and 8 students.

85 of the 165 students that attended football training are in Year 7.

(a) Complete the frequency tree.



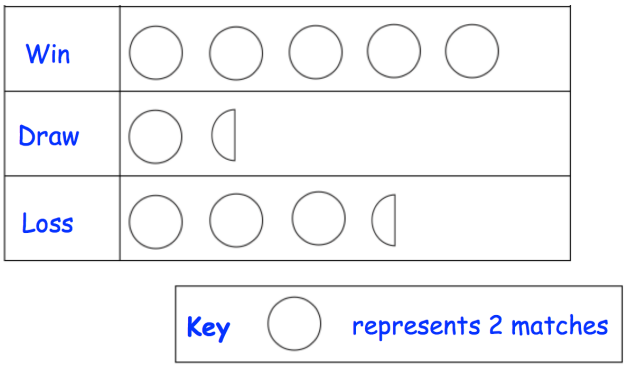
(2)

(b) What fraction of Year 8 students attended football training.

.....

(2)

13. The pictogram below shows the results of Bath City over a season.



Each win is worth 3 points.
Each draw is worth 1 point.
Each lose is worth 0 points.

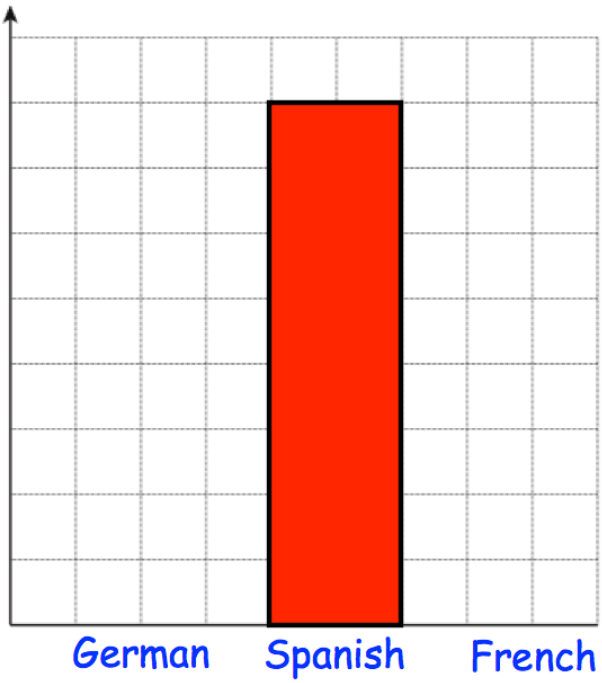
How many points did Bath City earn over the season?

.....

(4)

14. Miss Jackson asked the 32 students in her tutor group which language they study.

Each student studies one language only.



Half of the students in the tutor group study Spanish.
Six more students study German than French.

Complete the bar chart.

(4)

15. Darcy has a biased spinner.
A spinner has sections labelled 1, 2, 3, 4 and 5.
The table below shows information about some of the probabilities

Number	1	2	3	4	5
Probability	x	0.15	0.05	0.2	0.35

Work out the value of x.

.....

(2)

16. Here are the ages of 14 adults.

42 35 56 39 40 51 47

38 42 55 42 48 49 41

Draw an ordered stem and leaf diagram for these ages.

(3)

17. Work out an estimate for

$$\frac{596.4 \times 2.06}{0.521}$$

.....

(3)

---

18. Write 60 as a product of its prime factors.

.....

(2)

---

19. Write the following numbers in standard form.

(a) 5600

.....

(1)

(b) 41200000

.....

(1)

(c) 0.00000008

.....

(1)

Work out, giving each answer in standard form.

(d)

$(4 \times 10^5) \times (2 \times 10^4)$

.....

(2)

(e)

$(5 \times 10^6) \times (7 \times 10^8)$

.....

(2)

---

20. Bill is 80 years old.

His son Max is $\frac{5}{8}$ of his age.

His granddaughter Jayne is $\frac{1}{5}$ of his age.

How many years older than Jayne is Max?

.....

(4)

21. Work out, as a simplified fraction.

$$\frac{3}{4} + \frac{2}{9}$$

.....

(2)

---

22. Work out

$$1\frac{1}{3} \times 2\frac{2}{5}$$

Give your answer as a mixed number.

.....

(3)

---

23. Work out

$$\frac{2}{17} \div \frac{2}{5}$$

Give your answer as a fraction in its simplest form.

.....

(2)

24. What is the reciprocal of 4?

Circle the correct answer.

4 0.4 $\frac{1}{4}$ –4

(1)

---

25. Write these numbers in order of size.
Start with the smallest number.

0.13 $\frac{3}{20}$ 12% $\frac{1}{10}$ 0.09

.....

(2)

---

26. At Frome International train station, 35% of trains were late in a week.
In that week there were 440 trains.

Calculate how many trains were on time.

.....

(3)

27. The mass of a block of ice decreases from 80kg to 64kg.

Calculate the percentage decrease.

.....%

(2)

---

28. Charlotte and Melissa booked theatre tickets costing £400.
They have a voucher that entitles them to 20% off the total price.
Charlotte and Melissa share the total cost of the tickets in the ratio 1:4

Work out how much more Melissa pays than Charlotte.

.....

(5)

29. Fill in the missing numbers

(a)

$\square + 2 = -1$

(1)

(b)

$8 + \square = 0$

(1)

(c)

$-8 - \square = 3$

(1)

(d)

$2 \times \square = -16$

(1)

(e)

$-1 \times \square = 2$

(1)

(f)

$\square \times -7 = 42$

(1)

30. Here are four different digits.

8 1 5 6

(i) Put one digit in each box to make the **smallest** total.
You may only use each digit once.

(1)

(ii) Write down the total

.....

(1)

---

31. Isla buys 3 apples.
She pays with a £5 note.
Isla receives £2.45 change.

How much does one apple cost?

.....

(3)

32. Oscar is making fish pie.
Here is a list of ingredients for 5 people.

serves 5
500g cod
400g haddock
600ml milk
120g butter
40g flour
1kg potatoes

Oscar wants to make enough fish pie for 6 people.

How much milk should Oscar use?

.....ml
(3)

---

33. (a) Simplify 8a + 3c – 5c + 3a

.....
(2)

(b) Simplify 3a + 2w – 5a – 9w

.....
(2)

(c) Simplify $3y^2 + 2w^2 + y^2 - w^2$

.....

(2)

---

34. Simplify

(a) $8 \times y \times 2$

.....

(1)

(b) $a \times a \times a$

.....

(1)

(c) $3 \times a \times c$

.....

(1)

(d) $w \times 5 \times e$

.....

(1)

(e) $2y \times y$

.....

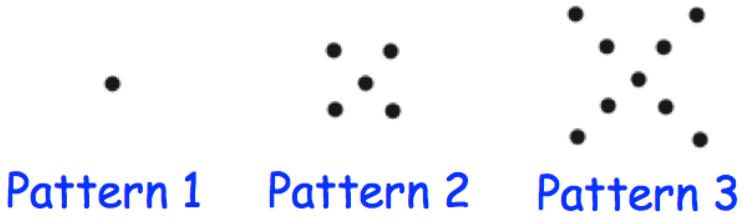
(1)

(f) $3a \times 4c$

.....

(1)

35. Here is a pattern of dots



(a) Continue the pattern to show Pattern 4

(2)

(b) How many dots will there be in Pattern 6?

.....

(1)

(c) Which pattern will use 77 dots?

.....

(1)

(d) Explain why there will **not** be a pattern that uses 200 dots.

.....

.....

(1)

36. Work out the *n*th term for this sequence

13 23 33 43 53 ... ...

.....

(2)

---

37. Factorise $x^2 + 4x - 12$

.....

(2)

---

38. Solve $y^2 + 10y + 24 = 0$

.....

(2)

39. Solve the inequality $4x + 6 \geq 8$

.....

(2)

40. $v = u + at$

(a) Work out v when u = 23, a = 4 and t = 3

.....

(2)

(b) Work out u when v = 30, a = 2 and t = 8

.....

(2)

(c) Work out t when v = 40, u = 12 and a = 4

.....

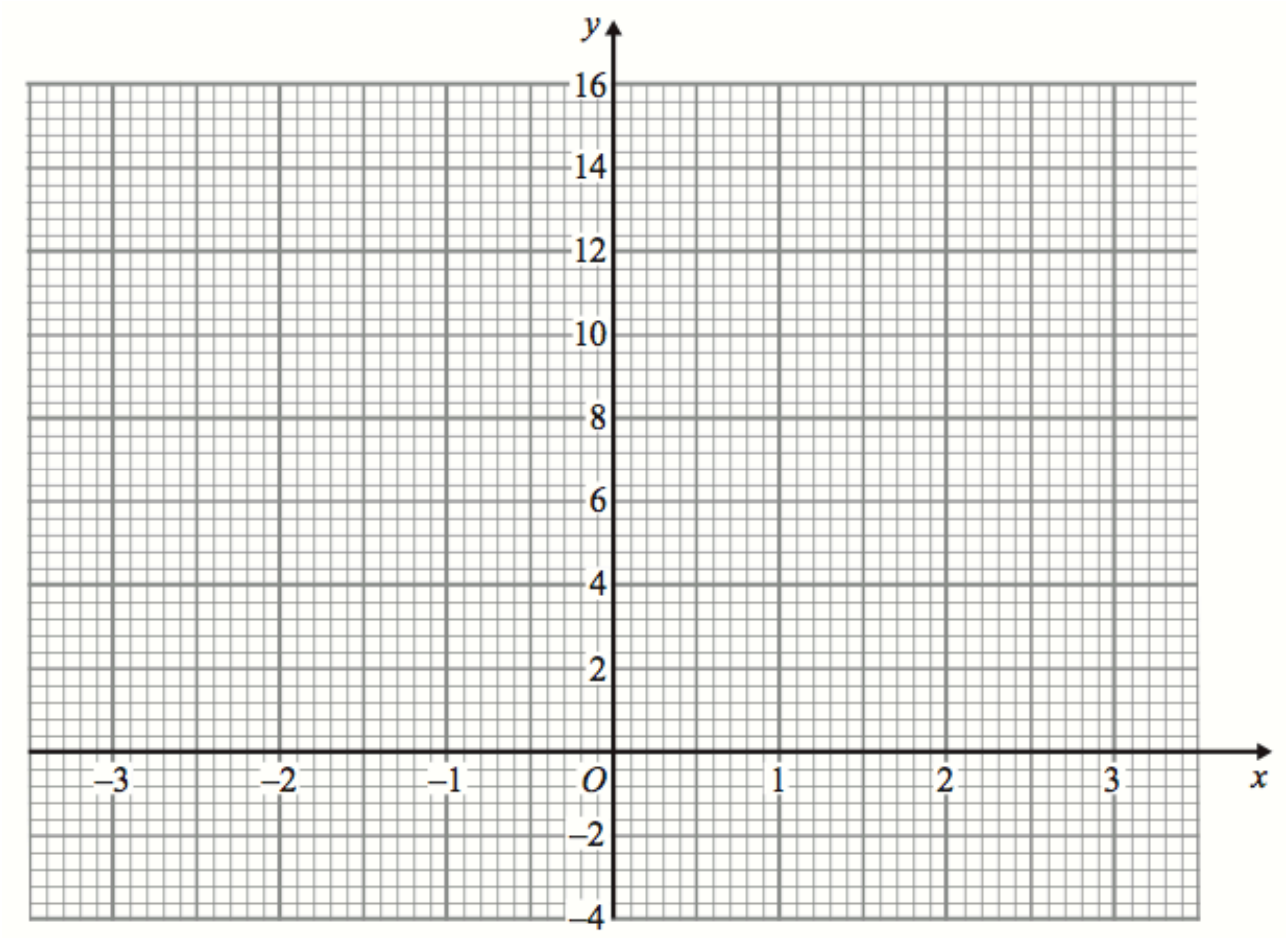
(2)

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

x	-3	-2	-1	0	1	2	3
y	6		0		2	6	

(2)

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



(2)