

Every Topic on the Edexcel
2022 Advanced Information
Practice Booklet
Paper 3 (Calculator)

Foundation Tier



GCSE
Maths Tutor



How it all Works!

Work through the practice booklet,
scan the code, watch the live
tutorial and check your answers!

Try it out!

Disclaimer: There is no guarantee that any specific topic will be examined this way in the summer and you cannot rely on this as your only source of revision. Please visit the YouTube channel for in depth lessons on each of the topics within this document along with any recommended revision that has been instructed by your education provider.

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Answer ALL questions.

Write your answers in the spaces provided.

You must write down all the stages of your working.

1. Put a pair of brackets in each statement to make the statement true.

a) $2 \times 7^2 - 2 = 94$

b) $16 \div 2 + 6 + 2 = 4$

(2 marks)

2. The table shows the temperature every four hours on a day in December.

Time	Temperature
2am	6°C
6am	-4°C
10am	-2°C
2pm	8°C
6pm	5°C
10pm	-1°C

a) Write down the time with the lowest temperature.

.....

b) Work out the difference between the temperature at 2pm and 6pm

(1 mark)

.....

Between 10pm and midnight the temperature went down by 5°C

(1 mark)

c) Work out the temperature at midnight.

.....

(1 mark)

3. Work out $\frac{2}{3}$ of 48

.....
(1 mark)

4. An advert for a tuition centre states that:

“8 out of 10 students pass their test first time”

James talks to 56 students who had used the tuition centre and found that 44 of them passed first time.

Does this support what is said in the advert?

You must show how you get your answer.

(2 marks)

5. Here is a list of fractions.

$$\frac{2}{10} \quad \frac{8}{40} \quad \frac{7}{35} \quad \frac{15}{80} \quad \frac{13}{65}$$

One of these fractions is **not** equivalent to $\frac{1}{5}$

Which fraction?

.....
(1 mark)

6. Find the highest common factor (HCF) of 24 and 64

.....
(2 marks)

7. Two lights flash at the same time.

One flashes every 12 seconds and the other flashes every 16 seconds.

After how long will they both flash at the same time?

.....
(2 marks)

8. a) Work out $\sqrt{\frac{14.86}{4.52}}$

Write down all the figures on your calculator display.

.....
(2 marks)

b) Give your answer to part (a) correct to 2 decimal places.

.....
(1 mark)

9. a) Work out $\sqrt{1.44 \times 3.62}$

Write down all the figures on your calculator display.

.....
(2 marks)

b) Give your answer to part (a) correct to 3 significant figures.

.....
(1 mark)

10. a) Write 180 minutes in hours

.....
(1 mark)

b) Work out the difference, in minutes between 1 hour 32 minutes and $1\frac{3}{4}$ hours.

.....
(2 marks)

11. Change 72km/h into m/s

.....
(2 marks)

12. A map has a scale of 1cm to 14km

On the map, the distance between Manchester and London is 18.8cm.

What is the real distance, in km, between Manchester and London?

.....
(2 marks)

13. a) Write 3% as a fraction.

.....
(1 mark)

b) Write 2.5% as a fraction.

.....
(2 marks)

14. a) Decrease 80 by 20%

.....
(1 mark)

b) Decrease 240 by 4%

.....
(1 mark)

15. There are 200 students in year 11.

75 of these students are girls.

a) Write down the fraction of the students that are girls.

.....
(1 mark)

There is a total of 1350 students in a school.

One day, 108 of the 1350 students are absent.

b) Work out the percentage of students who are absent.

.....
(2 marks)

16. A washing machine has been reduced in a sale by 20%.

The sale price is £512.

Work out the original cost.

.....
(3 marks)

17. A new printer costs £288 once 20% VAT has been added on.

Work out the cost of the printer before VAT.

.....
(3 marks)

18. In a box of cereal, 40% of the weight is nuts.

The rest of the cereal is corn.

Write the ratio of the weight of nuts to the weight of corn.

Give your answer in the form $1:n$

.....
(2 marks)

19. 8 identical pencil cases cost £12

Work out the cost of 10 of these pencil cases.

.....
(2 marks)

20. A train travelled from Manchester to London.

Train A left Manchester at 8:35am and arrived in London at 11:05am.

The train travelled at an average speed of 110mph.

Train B also left Manchester at 8:35am but was diverted by an extra 37 miles.

The train got to London at 11:35am.

Work out the difference between the average speed of train A and train B.

.....
(4 marks)

21. Harry travels from Appleton to Brockley at an average speed of 50mph.
He then travels from Brockley to Cantham at an average speed of 70mph.

Harry takes a total time of 5 hours to travel from Appleton to Cantham.

The distance from Brockley to Cantham is 210 miles.

Calculate Harry's average speed for the total distance travelled from Appleton to Cantham.

.....
(4 marks)

22. a) Simplify $5x + 5y + 4x - 2y$

.....
(1 mark)

b) Expand and Simplify $4(x - 3) - 2(1 - x)$

.....
(3 marks)

23. a) Factorise $6x + x^2$

.....
(1 mark)

b) Factorise fully $12x^2 - 10x$

.....
(2 marks)

24. Work out the value of $2x^2 - y$ when $x = 3$ and $y = 10$

.....
(2 marks)

25. a) Make x the subject of $y = \frac{x}{4} - 8$

b) Make x the subject of $y = \frac{x-8}{4}$

.....
(2 marks)

.....
(2 marks)

26. Make x the subject of $y = \sqrt{3x + 4}$

.....
(3 marks)

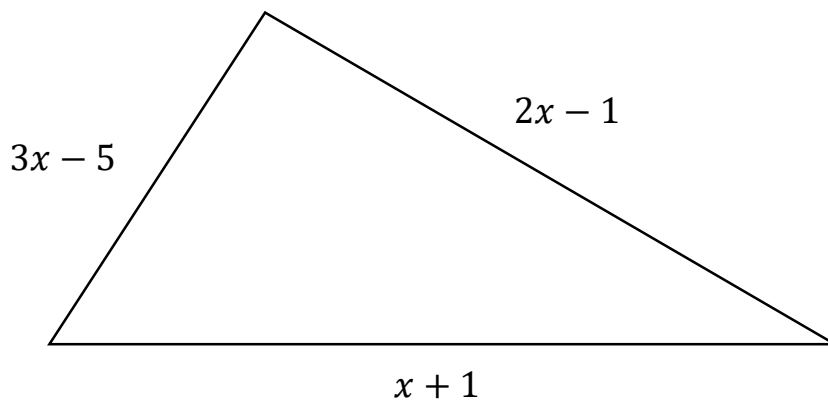
27. a) Solve $2x + 9 = 16$

.....
(1 mark)

b) Solve $6x + 5 = 2x + 15$

.....
(2 marks)

28.



a) Write an expression for the perimeter of the triangle.

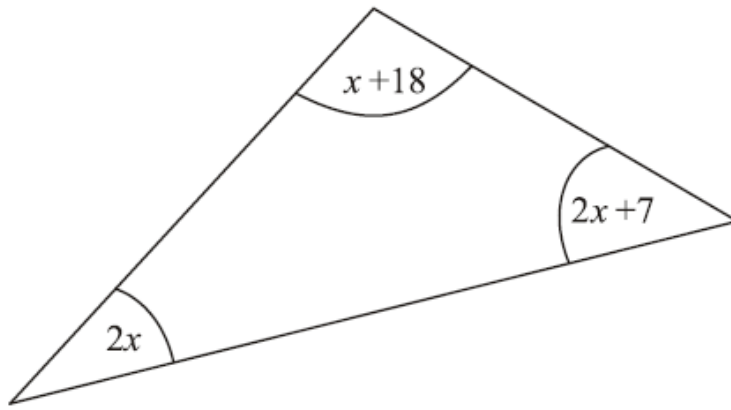
The perimeter of the triangle is 31cm.

.....
(1 mark)

b) Work out the value of x

.....
(2 marks)

29.



The size of the angles, in degrees, of the triangle are shown

Work out the value of x .

.....
(3 marks)

30. a) Write an expression in terms of n for the sequence:

2 , 8 , 14 , 20 , 26

.....
(2 marks)

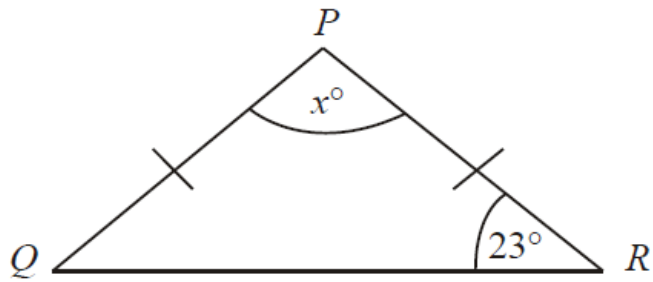
b) Another sequence is shown below:

3 , 7 , 11 , 15 , 19

Is the number 51 part of the sequence?

.....
(2 marks)

31.



PQR is an isosceles triangle.

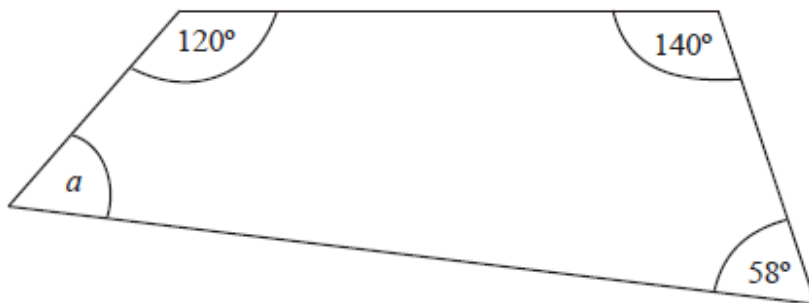
$$PQ = PR$$

$$\text{Angle } R = 23^\circ$$

Work out the value of x .

.....
(2 marks)

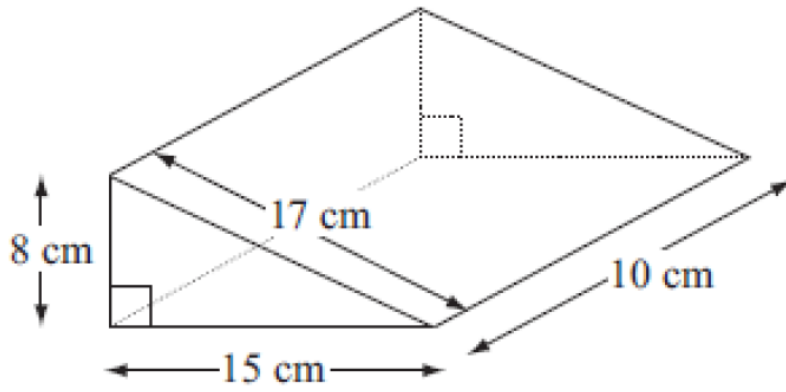
32.



Work out the value of a .

.....
(2 marks)

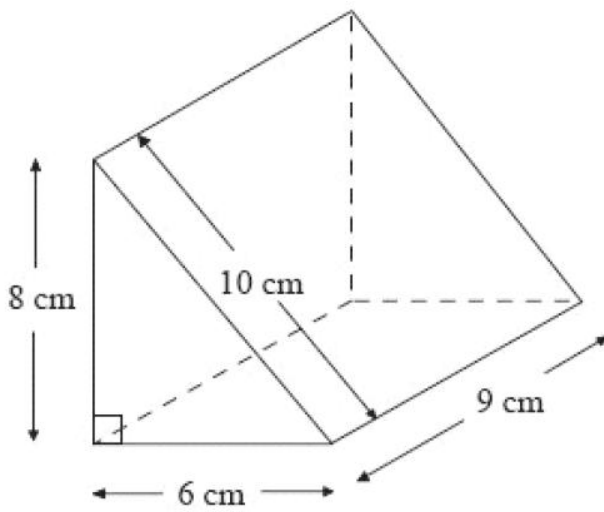
33.



Work out the volume of the triangular prism.

.....
(3 marks)

34.



Work out the surface area of the triangular prism.

.....
(4 marks)

35.

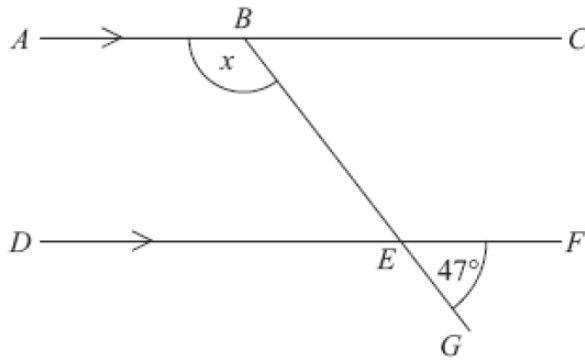


Diagram **NOT** accurately drawn

ABC and DEF are parallel lines.
BEG is a straight line.
Angle $GEF = 47^\circ$.

Work out the size of the angle marked x .
Give reasons for your answer.

(3 marks)

36.

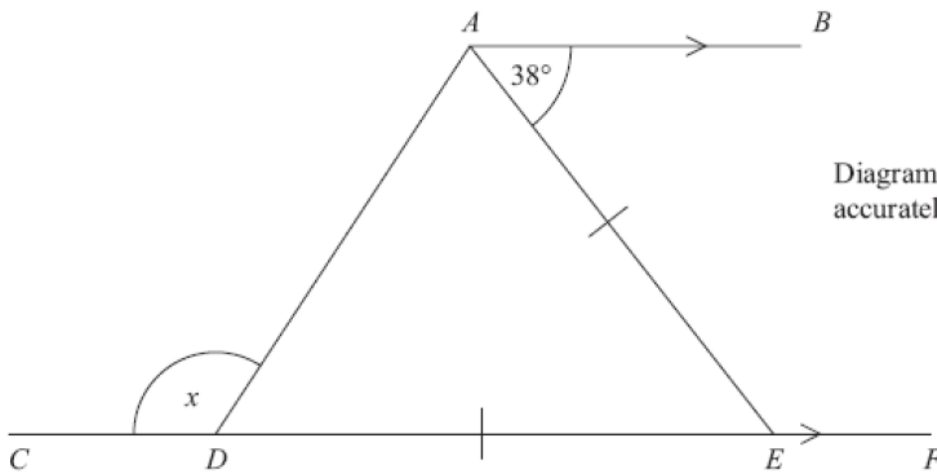


Diagram **NOT** accurately drawn

CDEF is a straight line.
AB is parallel to CF.
 $DE = AE$.

Work out the size of the angle marked x .
You must give reasons for your answer.

(4 marks)

37.

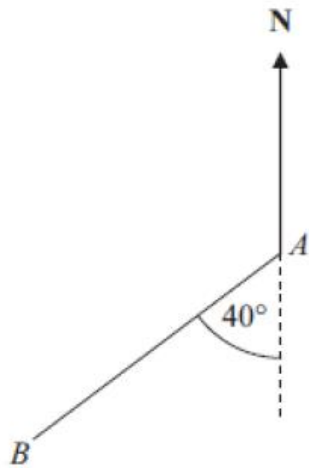


Diagram **NOT**
accurately drawn

a) Work out the bearing of B from A.

.....
(2 marks)

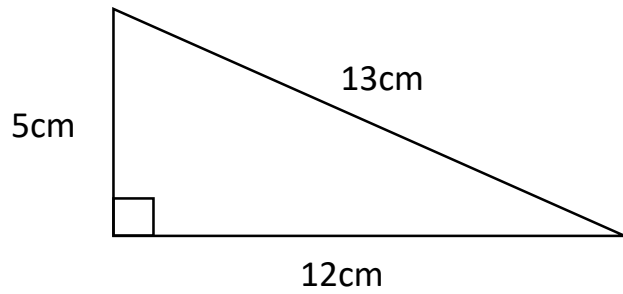
b) C is a town.

The bearing of town C from town A is 050°

Find the bearing of town A from town C.

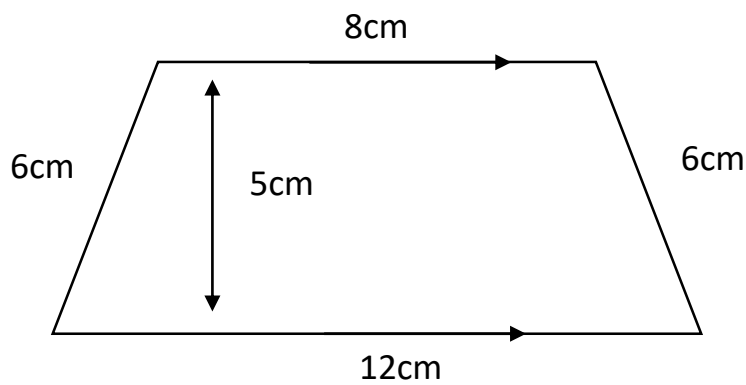
.....
(2 marks)

38. Work out the area of the triangle.



.....
(1 mark)

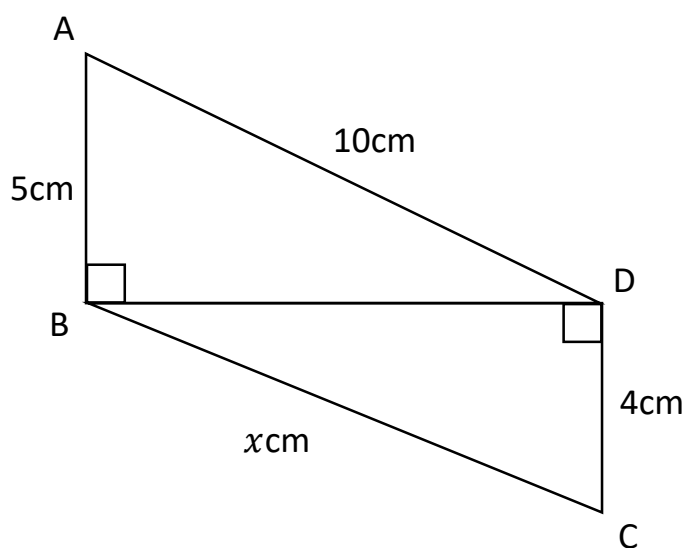
39. Work out the area of the trapezium.



.....
(2 marks)

40. Work out the value of x .

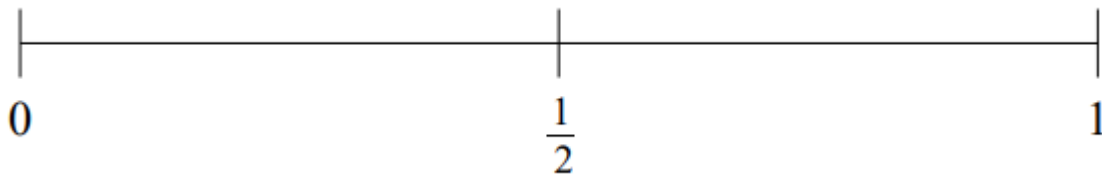
Give your answer correct to 2 decimal places.



.....
(4 marks)

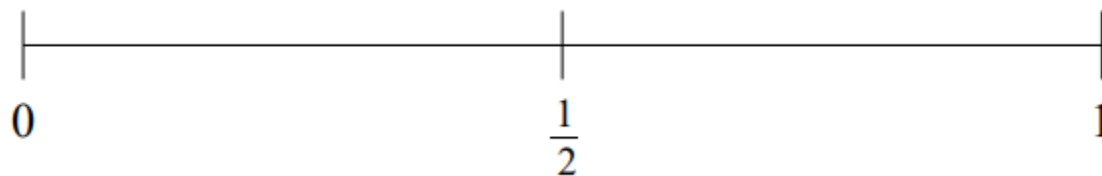
41. A fair ordinary dice is thrown.

a) On the probability scale below, mark with a cross (X), the probability that the dice will land on an odd number.



(1 mark)

b) On the probability scale below, mark with a cross (X), the probability that the dice will land on a 3.



(1 mark)

42. A local charity event is running a raffle to raise money.

There is 1 prize to be won in the raffle.

Jenny buys 14 raffle tickets.

A total of 450 raffle tickets are sold.

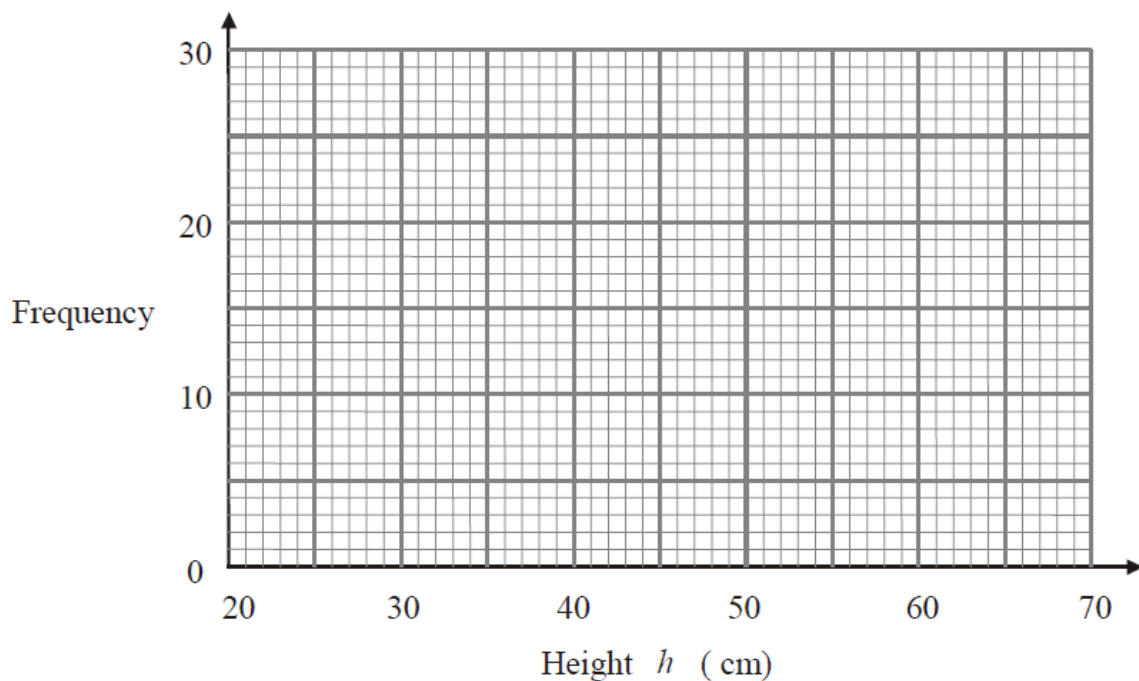
Find the probability that Jenny does not win the prize.

.....
(2 marks)

43. The table shows some information about the height of 60 plants.

Height (h cm)	Frequency
$20 < h \leq 30$	8
$30 < h \leq 40$	13
$40 < h \leq 50$	25
$50 < h \leq 60$	10
$60 < h \leq 70$	4

Draw a frequency polygon to show this information.



(3 marks)

44. Ben and Jean each played a game 6 times.
Their scores are shown below.

Ben:	9	10	11	8	8	12
Jean:	10	2	7	4	10	14

a) Compare the median score for Ben and Jean.

.....

.....

.....

(2 marks)

b) Who had the most consistent scores, Ben or Jean?

You must give a reason for your answer.

.....

.....

.....

(2 marks)

End of Paper