



Annual Examinations for Middle Schools 2023

YEAR 8

**MATHEMATICS
Main Paper**

TIME: 1h 30min

Question	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Total Main	Non- Calc	Total
Mark																	

DO NOT WRITE ABOVE THIS LINE

Name: _____ Class: _____

Answer ALL questions.

Calculators are allowed. All necessary working must be shown.

1. Complete these sequences:

a) 36, 49, 64, _____ , _____.

b) 7.5, 7.0, 6.5, _____ , _____.

(4 marks)

2. Complete the following table:

Percentages	Decimals	Fractions in lowest terms
		$\frac{2}{5}$
45%		

(4 marks)

3. a) Motorbike A uses 12 litres of fuel to cover 225 km.
How many kilometres does it cover with 1 litre of fuel?



Ans: _____ km

- b) Motorbike B uses 9 litres of fuel to cover 171 km.
How many kilometres does it cover with 1 litre of fuel?



Ans: _____ km

- c) Which motorbike is more economical, A or B?

Ans: Motorbike _____
(4 marks)

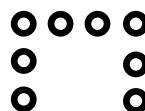
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4. Look at the patterns below.



Pattern 1



Pattern 2



Pattern 3

Pattern 4

- a) Draw Pattern 4.

- b) How many circles are there in Pattern 8?

Ans: _____ circles
(4 marks)

5. a) Write all the factors of 18.

_____ / _____ / _____ / _____ / _____ / _____.

b) Karla throws a six-sided fair dice.



(i) What is the probability of getting an even number?

Ans: _____

(ii) What is the probability of getting a square number?

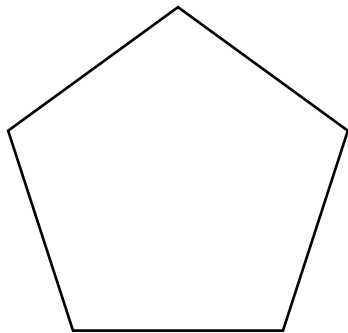
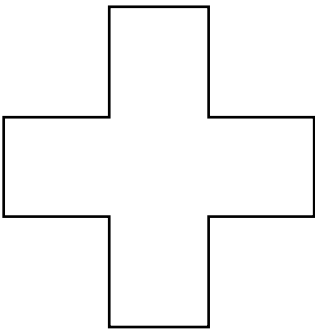
Ans: _____

(iii) What is the probability of getting a seven?

Ans: _____

(5 marks)

6. Write the order of rotational symmetry of these shapes.



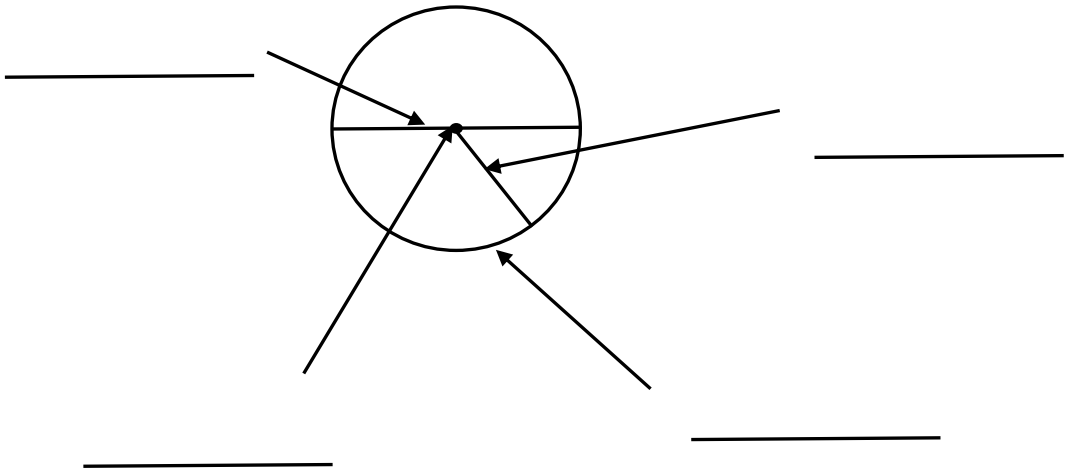
a) Order _____

b) Order _____

(2 marks)

7. Label the parts of the circle by using these words:

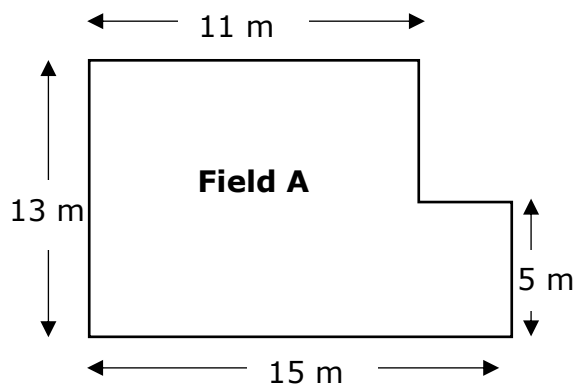
centre	radius	diameter	circumference
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(4 marks)

8. Mr Borg is a farmer. He wants to buy the **larger** field possible.

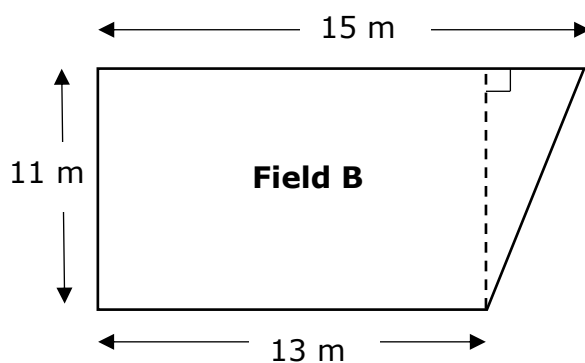
- a) Field A is made up of two rectangles. Work out the area of Field A.



Ans: _____ m²

Diagrams are not drawn to scale

- b) Field B is made up of a rectangle and a triangle. Work out the area of Field B.



Ans: _____ m²

- c) Which is the larger field?

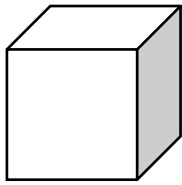
Ans: Field _____

- d) For each field 1 m² costs €1600. How much does the **larger** field cost?

Ans: €_____

(9 marks)

9. a) What is the volume of a cube of side 2 cm?

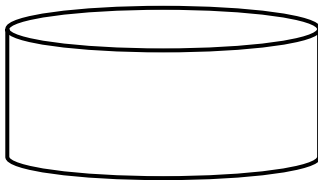


Ans: _____ cm^3

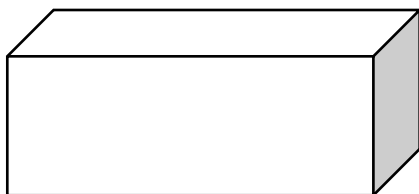
b) Name the solid shapes below. Choose from the following:

cone	cuboid	cylinder
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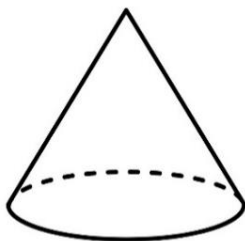
(i)



(ii)



(iii)



(5 marks)

10. a) Use the diagram below to write the coordinates of the points A, B and C.

A (_____ , _____) B (_____ , _____) C (_____ , _____)

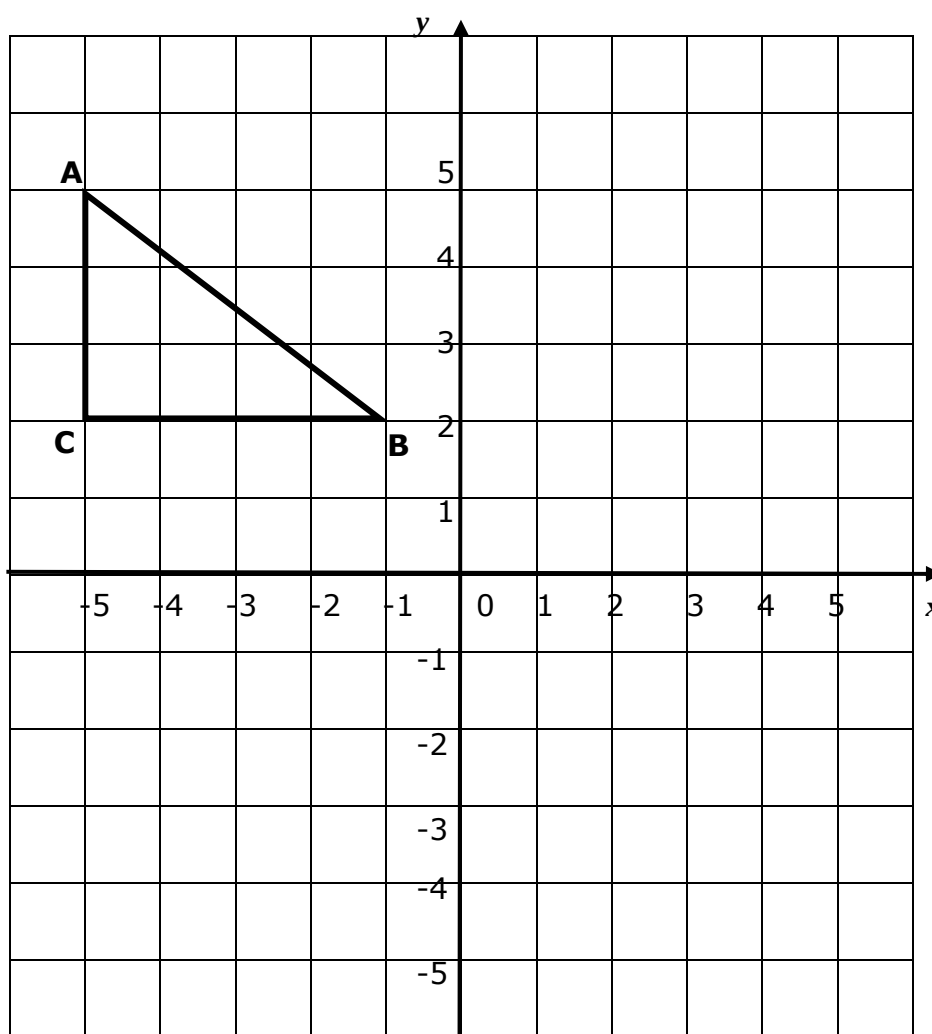
b) Translate Triangle ABC 6 to the right and 2 down.

c) (i) Plot the following points:

P (3, -1) Q (5, -3) R (5, -5) S (1, -5) T (1, -3)

(ii) Join the points P to Q, Q to R, R to S, S to T and T to P.

(iii) What is the name of polygon PQRST? _____



(10 marks)

11. The following are the heights in cm of the players of a football team.

171 161 177 162 170 150 153 179 161 180 151

a) Work out the mean height of the team.



Ans: _____ cm

b) What is the mode?

Ans: _____ cm

c) Find the median height.

Ans: _____ cm

d) What is the range?

Ans: _____ cm

(7 marks)

12. The students in a class are asked to name their favourite sport.

a) Complete this frequency table.

Favourite Sport	Tally	Frequency
Volleyball		4
Rugby		
Basketball		
Football		
Total		

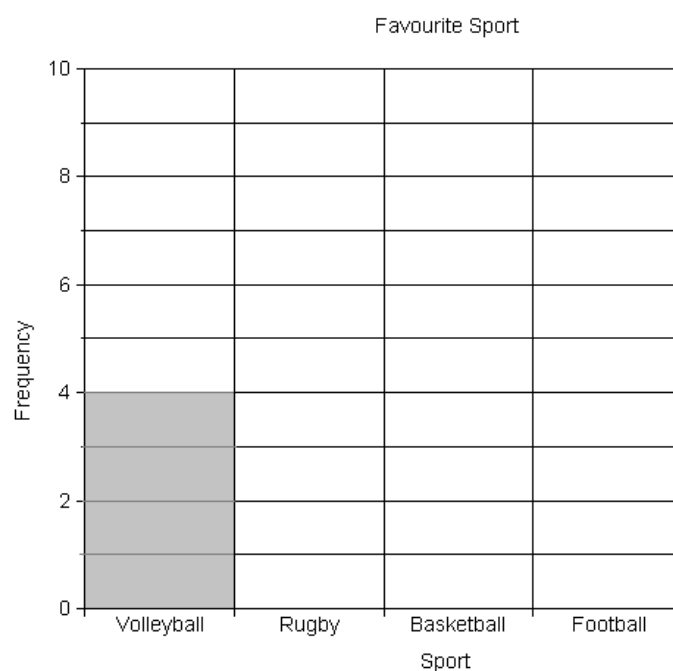
b) Which is the most popular sport in the class?

Ans: _____

c) What fraction of the students prefer Volleyball?
Give your answer in its simplest form.

Ans: _____

d) Complete this bar graph to illustrate the frequency table above.



(6 marks)

13. Four Gozo ferries travel between Ċirkewwa Malta and Mġarr Gozo as shown in the table below.

Ferry's Name	Departure from Ċirkewwa	Arrival at Mġarr
Ferry A	9:30 a.m.	10:00 a.m.
Ferry B	9:55 a.m.	10:25 a.m.
Ferry C	10:15 a.m.	10:45 a.m.
Ferry D	10:40 a.m.	11:10 a.m.

- a) Jeremy is going to Gozo with his family. They arrive at Ċirkewwa at 9:35 a.m. Which ferry will they board?

Ans: _____

- b) Name the ferry Paul must board to arrive at Mġarr at quarter to eleven.

Ans: _____

- c) At what time does the Ferry A leave Ċirkewwa?
Write this time in digital form.

Ans: _____

- d) Marlene gets the Ferry D to Gozo.
At what time does she arrive there? Write this time in words.

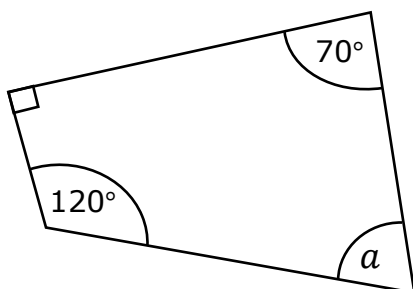
Ans: _____

(5 marks)

14. Calculate the size of the angles marked with letters.

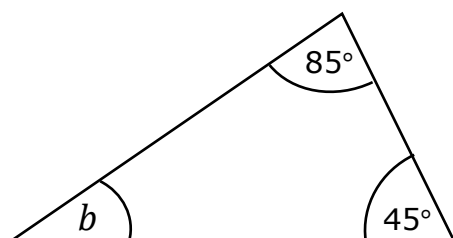
Diagrams are not drawn to scale

a)



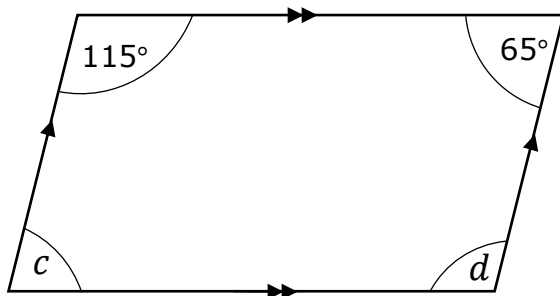
Ans: $a =$ _____^o

b)



Ans: $b =$ _____^o

c)



Ans: $c =$ _____^o

Ans: $d =$ _____^o

(6 marks)

END OF MAIN PAPER

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