

Annual Examinations for Middle Schools 2023

YEAR 7

**MATHEMATICS
Main Paper**

TIME: 1h 30min

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

DO NOT WRITE ABOVE THIS LINE

Name: _____

Class: _____

**Calculators are allowed but all necessary working
must be shown. Answer All questions.**

1. a) Write in words: 43 092

b) Write in ascending order.

51 763

16 753

15 763

16 573

Ans: _____, _____, _____, _____

c) Work out:

$$\frac{3}{16} \times \frac{24}{33}$$

Ans: _____

(6 marks)

2. Match the following statements. The first one is given as an example.

Next summer, I will go swimming.	● Evens
Finding a prime number between 48 and 52.	● Impossible
Picking an even number from 102, 112, 124, 148.	● Very Likely
Getting a head when tossing a coin.	● Very Unlikely
The probability that the first person you meet was born in February.	● Certain

(4 marks)

3. Fill in the Carroll Diagram with the numbers below.

10, 3, 9, 5, 6, 20, 4, 18

	Factors of 18	Factors of 20
Odd		
Even		

(3 marks)

4. BJL Bank offers interest rate of 4% per annum.

a) Convert the interest rate to:

i) a decimal number

Ans: _____

ii) a fraction in its lowest terms

Ans: _____

b) Jamie invests €5760 in a bank account offering 4% p.a. interest rate. Calculate his interest after one year.

Ans: _____

(4 marks)

5. a) Simplify: $3p + 7h - 9h + 2p$

Ans: _____

b) When competing in a football tournament, a team is awarded 3 points for every win and 1 point for every draw. The total number of wins is w and the total number of draws is d .

i) Write a formula for the total points, T , at the end of the tournament.

Ans: $T =$ _____

ii) Calculate the total points gained when the team wins 18 games and draws 15.

Ans: _____

(7 marks)

6. At the greengrocer, Clayton buys the items in the following table.

Amount	Item	Price per kg	Total per Item
4 kg	potatoes	€1.95	
2 kg	onions	€1.65	
1.5 kg	carrots	€1.20	
1.8 kg	marrows	€	
		Total	€15.51

Clayton spends €15.51.

Fill in the table above and calculate the price of 1 kg of marrows.

Ans: _____

(5 marks)

7. Is the statement True or False?

	True	False
a) The square of 9 is 81.		
b) The cube of 3 is 27.		
c) When 145.3792 is rounded to 2 d.p., the answer is 145.38		
d) When converting 6.035 litres to ml, the answer is 6350 ml.		
e) An angle of 62° is an obtuse angle.		
f) A rectangle has two pairs of parallel lines.		
g) A regular polygon has equal sides and equal angles.		

(7 marks)

8. The heights of a group of children are:

80 cm, 96 cm, 78 cm, 86 cm, 96 cm, 84 cm, 108 cm, 149 cm, 96 cm

Work out:

a) the mean

Ans: _____

b) the mode

Ans: _____

c) the median

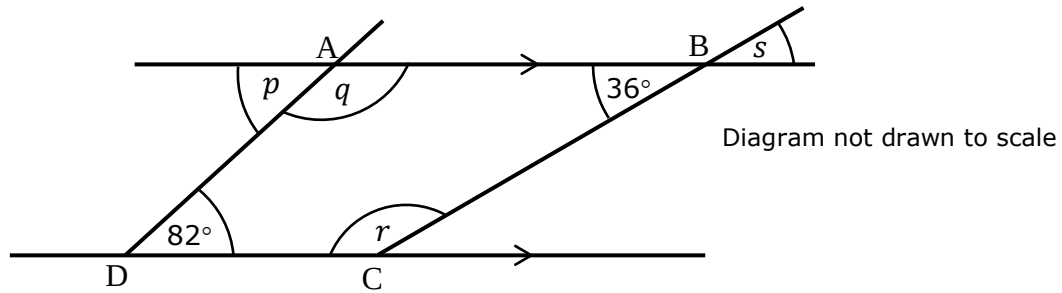
Ans: _____

d) the range

Ans: _____

(7 marks)

9. a) Calculate the size of the marked angles, giving a reason for each answer.



$p =$ _____ Reason: _____

$q =$ _____ Reason: _____

$r =$ _____ Reason: _____

$s =$ _____ Reason: _____

- b) Is quadrilateral ABCD a parallelogram? Explain why.

(9 marks)

10. When on holiday in Spain, the schedule of one of the days is as follows:

08:15	Breakfast
09:00	Departure from hotel to Madrid
10:30	Arrival at Madrid
10:45	Free time
12:00	Lunch
13:30	Visit to castle
15:40	Departure to hotel

a) i) How long is the visit to the castle? Write your answer in hours and minutes.

Ans: ____h ____min

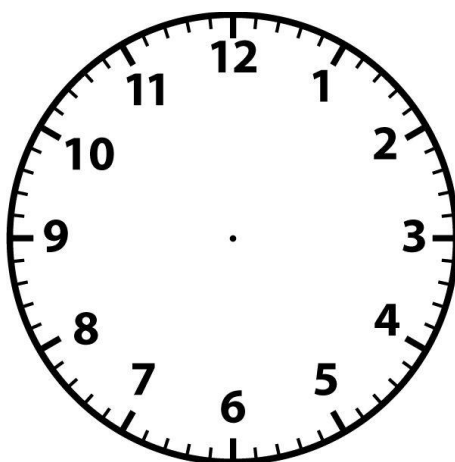
ii) Convert your answer to part (i) to minutes.

Ans: _____

b) i) The trip back to the hotel takes 1 hour 45 minutes.
At what time does the coach arrive at the hotel?
Give your answer in 12-hour clock.

Ans: _____

ii) On the clock, mark the arrival time back at the hotel.

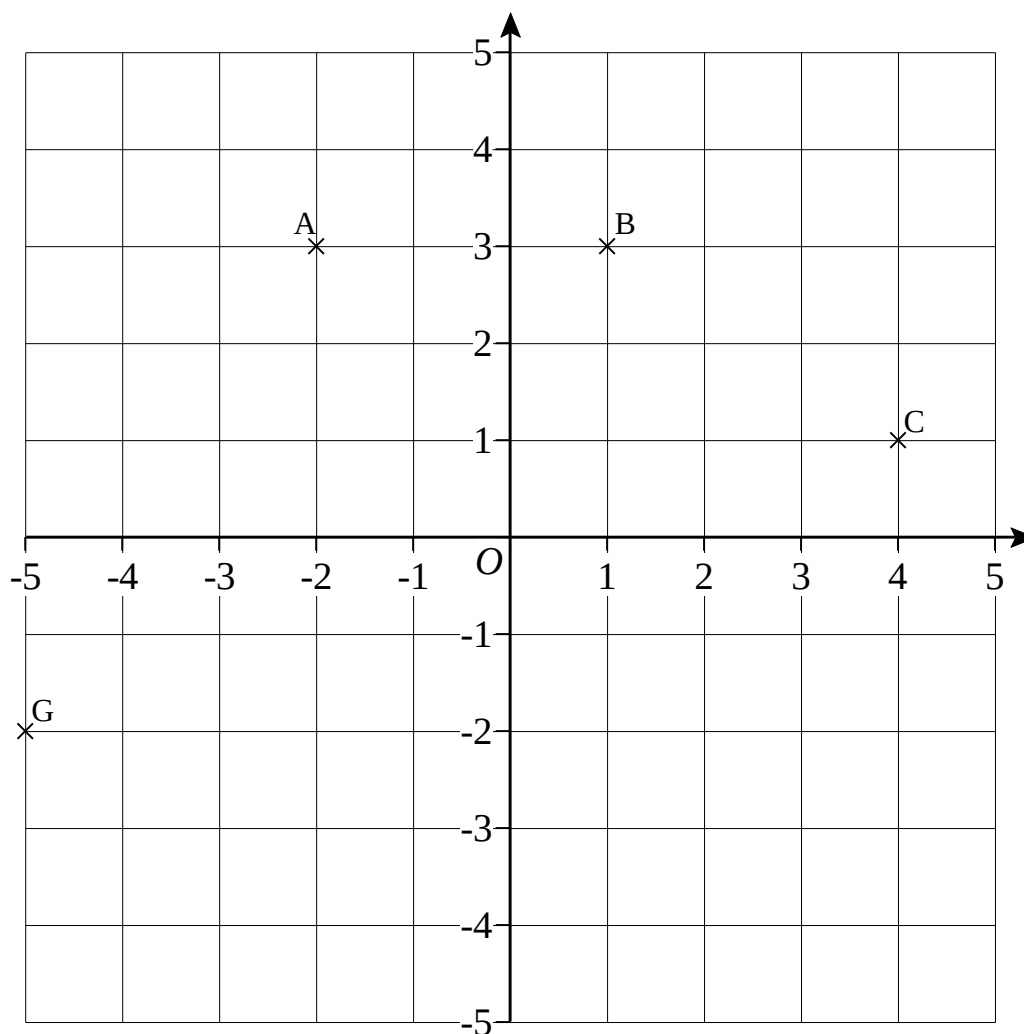


(6 marks)

11. a) Write the coordinates of:

Point A: (_____, _____)

Point B: (_____, _____)



b) Plot the coordinates: D(4, -2) E(1, -4) F(-2, -4)

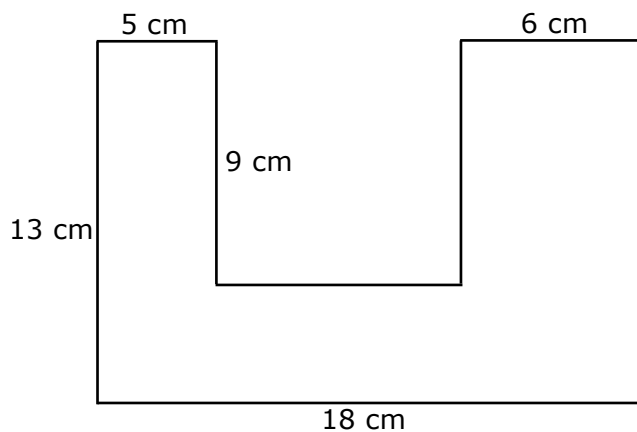
c) Join the points A, B, C, D, E, F, G, in alphabetical order.
Mark vertex H to form polygon ABCDEFGH so that it has 2 lines of symmetry.
Write the coordinates of H.

Ans: H (_____, _____)

d) Underline:
Polygon ABCDEFGH is (a hexagon, a pentagon, an octagon, a decagon).

(7 marks)

12. a) Silvana has the following U-shaped piece of metal.



Diagrams are not drawn to scale

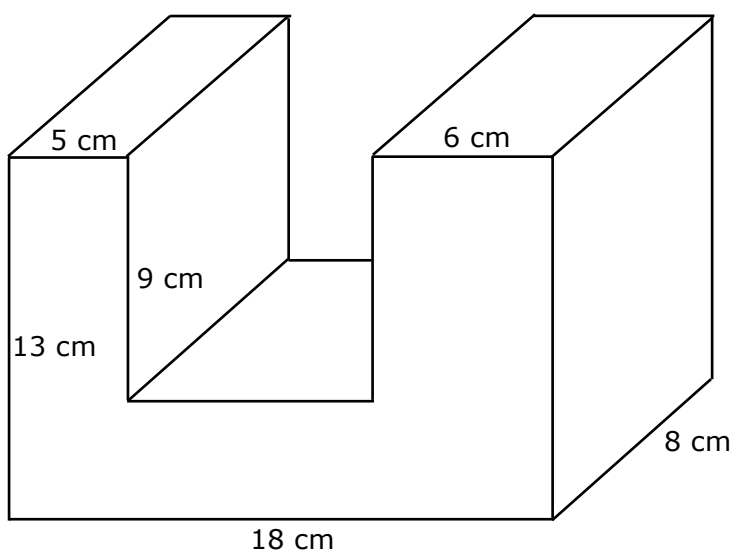
- i) Calculate the area of this piece of metal.

Ans: _____

- ii) The price of the metal used is €26 for 100 cm^2 .
Calculate the cost of the metal used to make this shape.

Ans: _____

- b) Calculate the volume of the shape below.



Ans: _____

(10 marks)

END OF EXAMINATION PAPER