

Track 2

Annual Examinations for Middle Schools 2024

YEAR 7 **MATHEMATICS** **TIME: 1h 40min**
Main Paper

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. a) Write the number 409 317 in words.

- b) From the set of numbers 1, 2, 3, 4, 5, 9, 12, 15, 18, 27 and 36, choose:

- i) a prime number _____
- ii) a square number _____
- iii) a factor of 30 _____
- iv) a cubic number _____

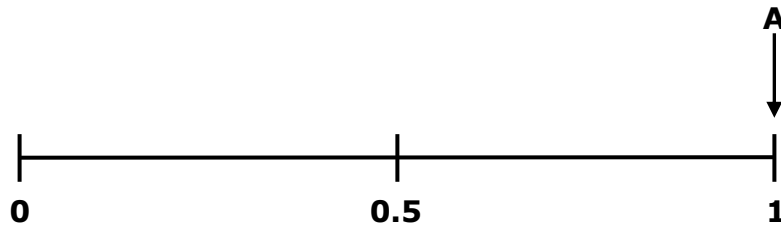
- c) Use the symbols $<$ or $>$ to fill in the box:

9734 9689

(6 marks)

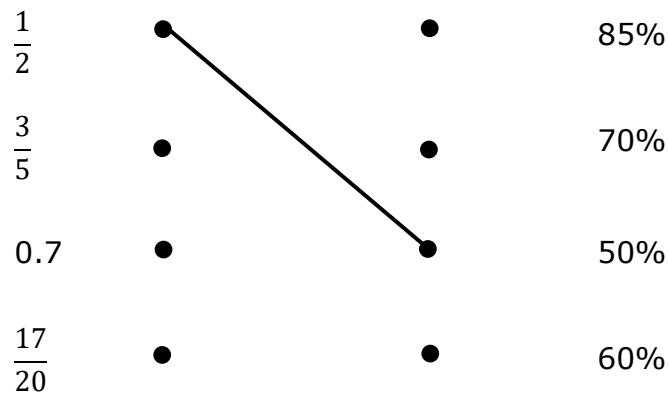
2. The five statements below are related to a set of numbers from 1 to 10.
Mark each statement on the probability scale below. The first one is done for you.

- A The probability of choosing a positive number.
B The probability of choosing an even number.
C The probability of choosing a negative number.
D The probability of choosing a factor of 4.
E The probability of choosing a multiple of 2 or 3.



(4 marks)

3. a) Match.



- b) Write down in ascending order (smallest first).

$$1\frac{1}{5} \quad \quad \quad \frac{4}{5} \quad \quad \quad 0.93$$

Ans: _____

- c) Work out: $\frac{6}{7} \times \frac{21}{24}$

Ans: _____

- d) Change $\frac{14}{5}$ as a mixed number.

Ans: _____

(8 marks)

4. Thomas buys a sofa. The sofa costs €1900.
The shop offers two payment options A and B.

Option A: Pay €500 as deposit
Remaining amount to be paid in 12 payments of €150 each month

- a) Calculate the cost of the sofa using option A.

Ans: _____

Option B: 8% discount on the price when paying the full amount in cash

- b) Calculate the cost of the sofa using Option B.

Ans: _____

- c) How much money does Thomas save if he chooses option B?

Ans: _____

(6 marks)

5. Fill in the Carroll diagram with the shapes below. The first one is done for you.

Square Equilateral Triangle Rectangle
Parallelogram Regular nonagon

	Regular shapes	Irregular shapes
Less than 4 lines of symmetry		
4 or more lines of symmetry	Square	

(4 marks)

6. The fuel tank in Josie's car can hold 50 litres of petrol when full.
- a) Josie pays €68 to fill the empty tank completely. Work out the price of petrol per litre.

Ans: _____

- b) Josie drives 360 km from Rome to Bologna to visit her family.
Her car uses 5.5 litres for every 100 km.
How much petrol, in litres, does Josie's car need for this trip?

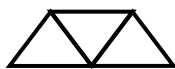
Ans: _____

- c) Does she have enough fuel in the tank to drive back home?
Give a reason for your answer.

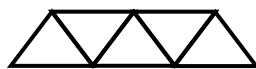
Ans: Yes/No _____ because _____

(7 marks)

7. a) i) In the space provided, draw pattern 4.



Pattern 1



Pattern 2



Pattern 3

Pattern 4

- ii) How many triangles are there in pattern 5?

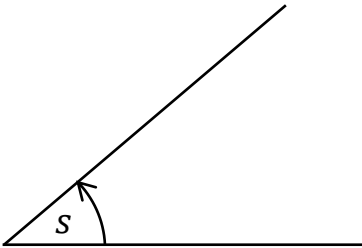
Ans: _____

- b) Continue the number pattern.

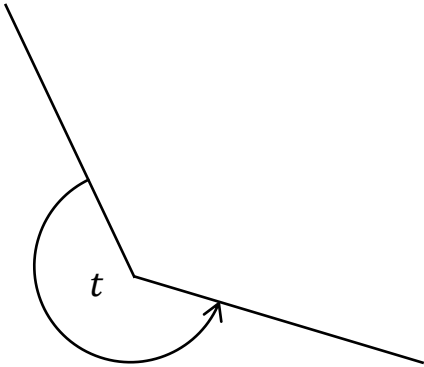
2, 5, 10, 17, _____, _____

(4 marks)

8. a) Use a protractor to measure the following angles accurately.



Ans: $s = \rule{1cm}{0.4pt}^\circ$



Ans: $t = \rule{1cm}{0.4pt}^\circ$

b) Work out the size of the marked angles, giving reasons for your answer.

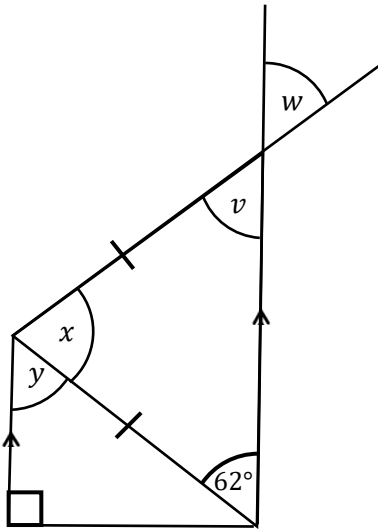


Diagram not drawn to scale

$v = \rule{1cm}{0.4pt}^\circ$

Reason:

$w = \rule{1cm}{0.4pt}^\circ$

Reason:

$x = \rule{1cm}{0.4pt}^\circ$

Reason:

$y = \rule{1cm}{0.4pt}^\circ$

Reason:

(11 marks)

9. Use the following set of Logo commands to sketch a shape.

FD 50 LT 45 FD 50 BK 50 RT 90 FD 50

Start from the point A.

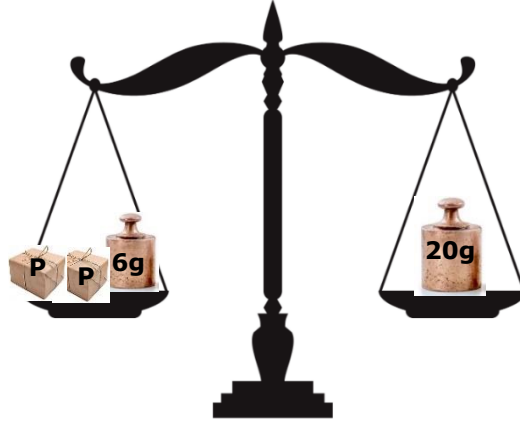
●
A

(3 marks)

10. a) Simplify: $5x + 2y - 3x + 10y$

Ans: _____

b) The balanced scale below shows two packets weighing P grams each and masses in grams on either side.



i) Write an equation for this balanced scale.

Ans: _____

ii) Solve the equation to find the mass of one packet.

Ans: _____

(6 marks)

11. The price of a product in six different pharmacies is listed below.
€7.45 €7.49 €7.49 €7.53 €7.56 €7.60

a) Work out the mean price.

Ans: _____

b) Work out the median price.

Ans: _____

c) What is the modal price?

Ans: _____

d) Calculate the range.

Ans: _____

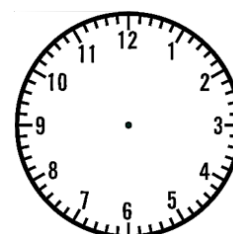
(7 marks)

12. Amy follows the timetable below during her summer holidays.

SUMMER HOLIDAYS SCHEDULE			
TIME	MONDAY	WEDNESDAY	FRIDAY
8:00 am	Breakfast	Breakfast	Breakfast
9:00 am	Clean room	Shopping for groceries	Wash the car
10:10 am	Reading	Cook pancakes	Gardening
11:30 am	Cook muffins	Bathe the dog	Reading

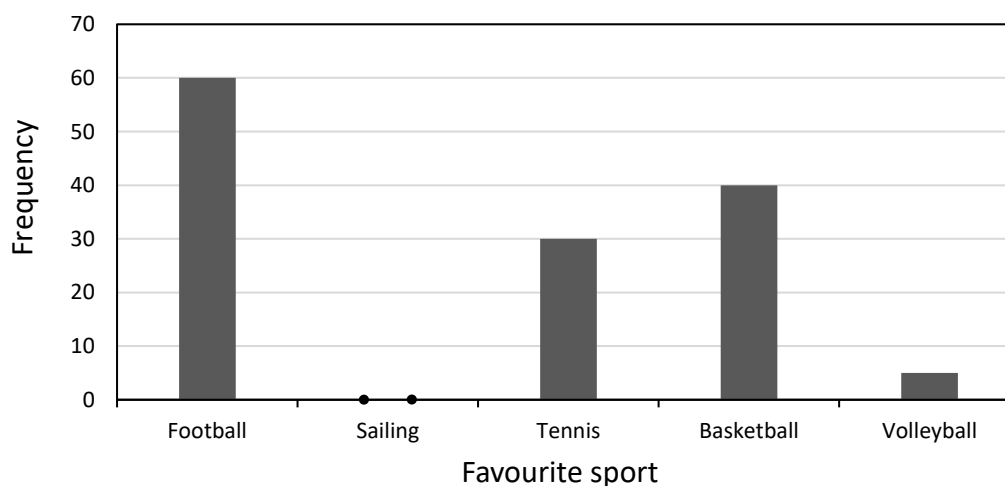
Fill in:

- a) Amy cleans her room every _____ at _____.
- b) Every Wednesday at 11:30 am she _____.
- c) On the clock face, draw the time at which Amy starts gardening.



(4 marks)

13. A group of 150 students were asked to choose their favourite sport. The bar chart below represents the students' choice.

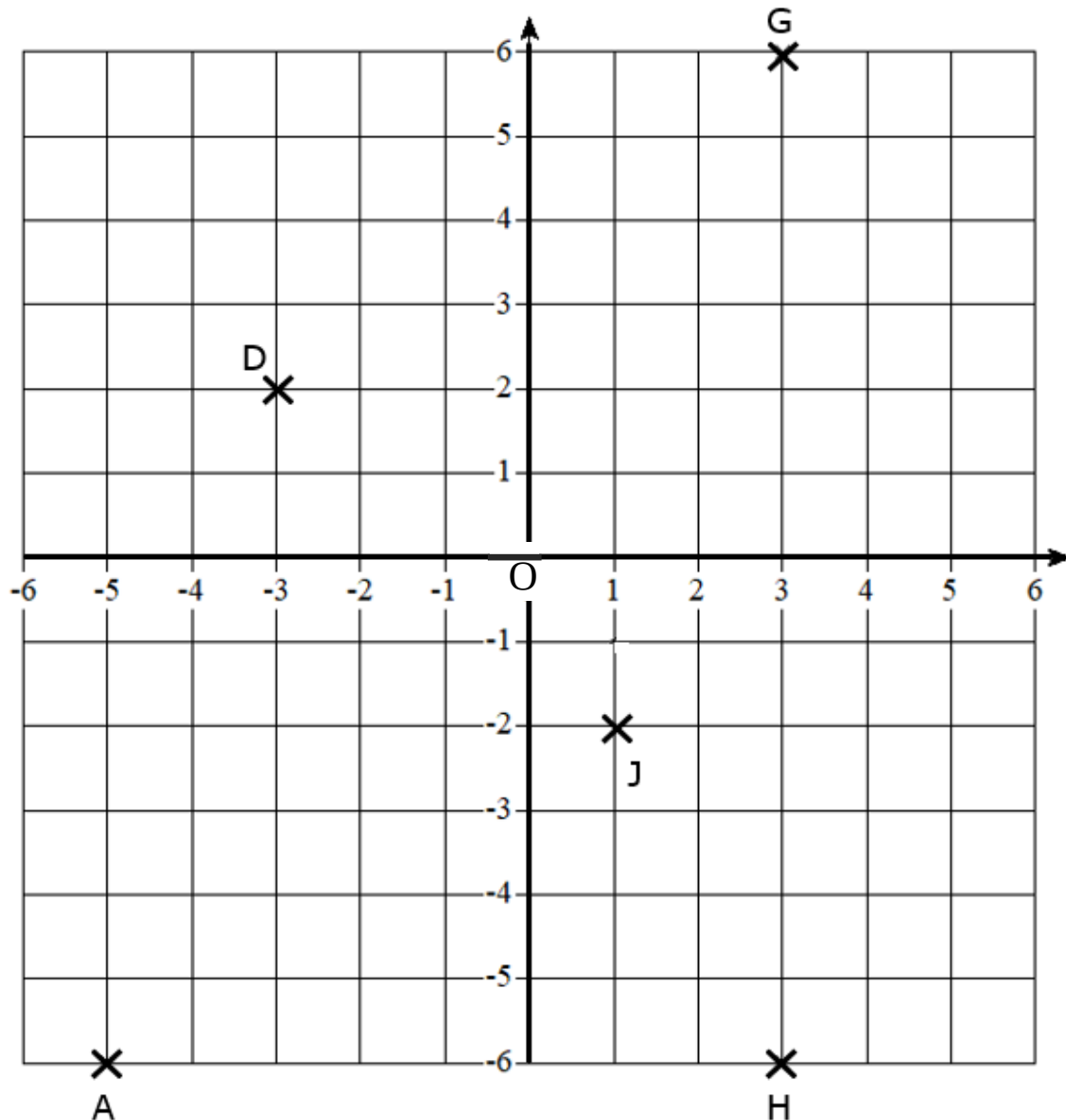


- a) How many students like Volleyball? Ans: _____
- b) Work out the number of students that chose Sailing.
- Ans: _____
- c) Use your answer in b) to fill in the missing bar for Sailing.

(4 marks)

14. a) On the grid below, plot and label the following points:

B(-5 , 6) C(-3 , 6), E(1 , 2),
F(1 , 6), I(1 , -6) K(-3 , -2)



- b) Join the points A, B, C, D, E, F, G, H, I, J and K in that order.
c) On the grid, mark another point L to form the shape of the letter H.
d) Write down the coordinates of point L.

Ans: L (____, ____)

(6 marks)

End of Main Paper