

Annual Examinations for Middle Schools 2022

YEAR 7

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	Global Mark
Mark																	

DO NOT WRITE ABOVE THIS LINE

Name: _____

Class: _____

**CALCULATORS ARE ALLOWED BUT ALL NECESSARY WORKING
MUST BE SHOWN. ANSWER ALL QUESTIONS.**

1. A fair six-sided die is thrown. Write the probability of getting:



a) a 2

Ans: _____

b) a 9

Ans: _____

c) a square number

Ans: _____

d) a prime number

Ans: _____

(4 marks)

2. a) Each row, column and diagonal, add up to the same number. Fill in.

4		
	5	7
	1	6

- b) Estimate.

$$29 \times 53$$

Ans: _____

- c) Work out.

$$4 + 10^3 \times 2$$

Ans: _____

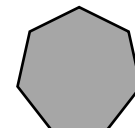
(6 marks)

3. Match.

Triangle



Trapezium



Regular heptagon



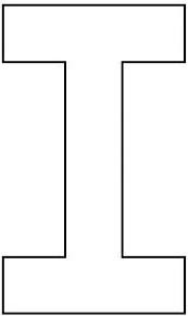
(3 marks)

4. Draw the lines of symmetry of:

a)



b)



(3 marks)

5. a) Complete the table.

Percentage	Fraction	Decimal Number
38%		
	$\frac{3}{50}$	

b) Javier uses 60% of his 720 m² field for fruit trees. What area is used for fruit trees?

Ans: _____m²

(6 marks)

6. a) Circle **two** equivalent fractions of $\frac{12}{15}$.

$$\frac{4}{5} \quad , \quad \frac{3}{5} \quad , \quad \frac{48}{60} \quad , \quad \frac{16}{25} \quad , \quad \frac{24}{25}$$

- b) Nicky ran $\frac{2}{3}$ of the track. Daniel ran $\frac{5}{12}$ of the same track. How much further than Daniel did Nicky run? Give your answer in its simplest form.

Ans: _____

- c) Write twenty five minutes past three in the afternoon using the 12-hour clock.

Ans: _____

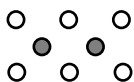
(6 marks)

7. a) Draw Pattern 4.

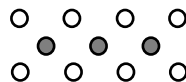
Pattern 1



Pattern 2



Pattern 3



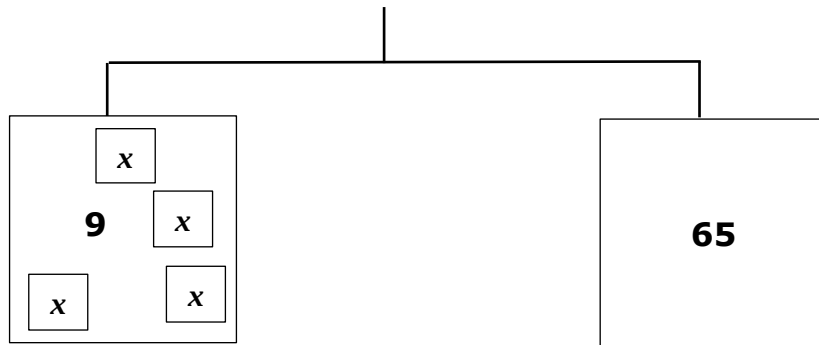
Pattern 4

- b) Fill in the table.

Pattern Number	1	2	3	4	5	6
Number of white circles	4	6				
Number of grey circles	1	2	3	4	5	6
Total number of circles	5	8				

(4 marks)

8. a) Write the equation which represents this balance.



Ans: _____

- b) Solve the equation in part a).

Ans: _____

(3 marks)

9. The ages of nine friends are:

30, 34, 31, 40, 29, 38, 30, 35, 30

Work out:

- a) the mean

Ans: _____

- b) the mode

Ans: _____

- c) the median

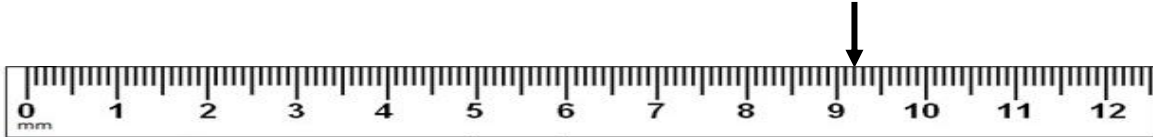
Ans: _____

- d) the range

Ans: _____

(7 marks)

10. a) Write the reading shown by the arrow.



Ans: _____

- b) Round 13 to the nearest 10.

Ans: _____

- c) i) What is the value of the digit **9** in the number **39 485**?

Ans: _____

- ii) What is the value of the digit **1** in the number **45.71**?

Ans: _____

- d) Fill in using $>$, $<$ or $=$

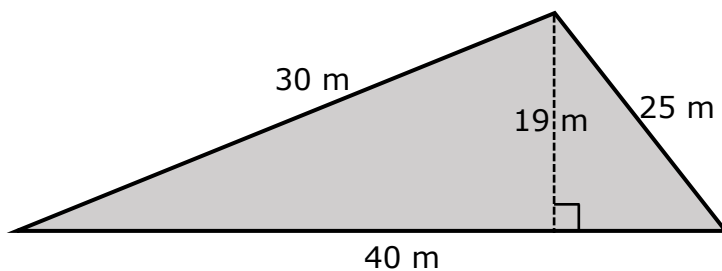
i) $34\,210$ $34\,201$

ii) 1.45×26.3 2.63×14.5

(6 marks)

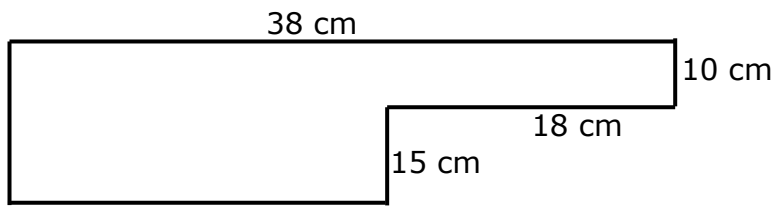
11. a) Calculate the area of the triangle.

Diagrams are not drawn to scale



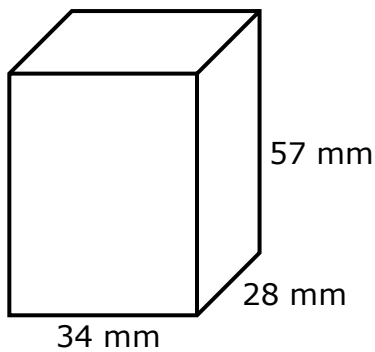
Ans: _____ m^2

b) Calculate the area of the following.



c) Work out the volume of the cuboid.

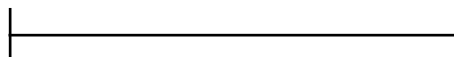
Ans: _____cm²



Ans: _____mm³

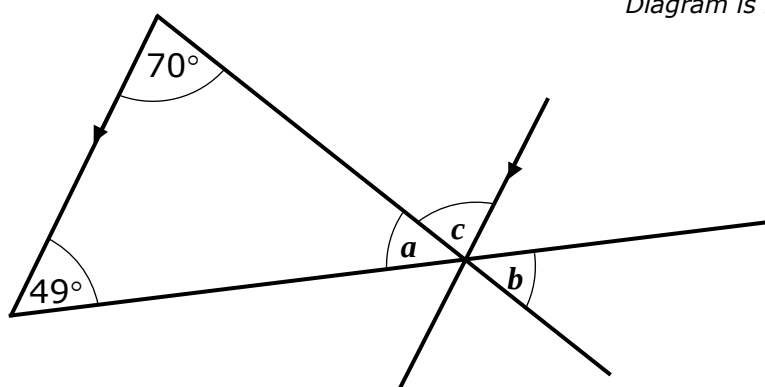
(9 marks)

12. a) Draw and label an angle of 160°.



- b) Calculate the size of the marked angles, giving reasons for your answers.

Diagram is not drawn to scale



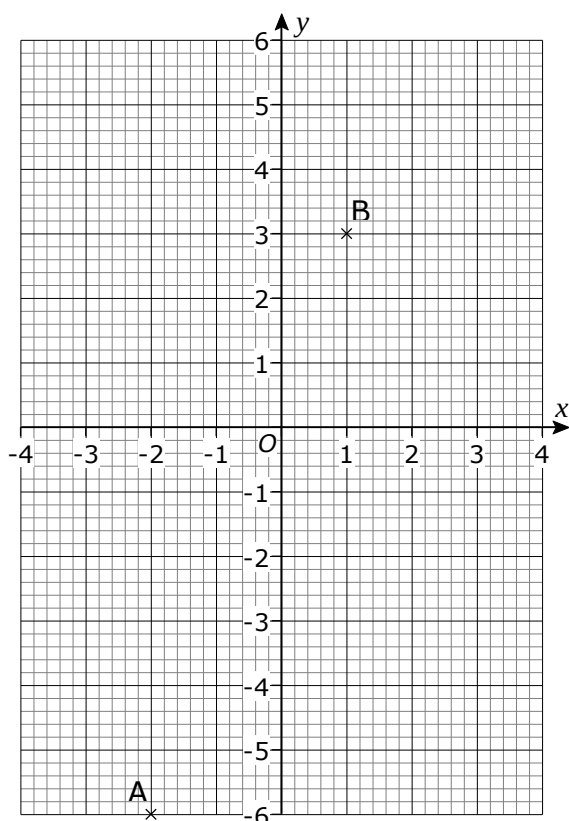
$a =$ _____ Reason: _____

$b =$ _____ Reason: _____

$c =$ _____ Reason: _____

(8 marks)

13. a) The coordinates of the points A and B are



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

- b) The line $y = 3x$ passes through points A, B and C. Fill in the y coordinate of point C on the line when the x coordinate is 2.

Ans: C (2 , _____)

- c) Plot point C and join line AC.

(4 marks)

14. a) This basic cupcake recipe shows the ingredients needed for 12 cupcakes.

INGREDIENTS

200 gr flour

150 gr sugar

125 gr butter

125 ml milk

1 teaspoon vanilla essence

2 eggs

i) How many grams of sugar are needed for 8 cupcakes?

Ans: _____ g

ii) How many millilitres of milk are needed for 30 cupcakes?



Ans: _____ ml

b) Flour is sold in two different options. Which option is better value for money? Show your working.

Option A



1 kg = €0.90

Option B



2 pkts of 800 gr
for €1.28

Ans: _____

(6 marks)

END OF EXAMINATION PAPER

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