Index No _____

GOVERNMENT OF MALTA
MINISTRY FOR EDUCATION, SPORT, YOUTH
RESEARCH AND INNOVATION
DEPARTMENT OF EXAMINATIONS

Candidate's name must NOT be written on any sheet of the examination paper.
Index Number must be written once ONLY above the perforation.

Qualifying Examination for Supply Learning Support Educators

February 2026

Subject: **Mathematics**

Date: **18th February 2026**

Time: **One hour and thirty minutes**

Instructions to candidates:

- Answer ALL questions.
- Write your answers in the space available on the examination paper.
- Show clearly all the necessary steps, explanations, and construction lines in your working.
- Unless otherwise stated, diagrams are drawn to scale.
- The use of non-programmable scientific calculators with statistical functions and of mathematical instruments is allowed.
- Candidates are allowed to use transparencies for drawing transformations.
- This paper carries a total of 100 marks.

Question No.	1	2	3	4	5	6	7	8
Mark								

Question No.	9	10	11	12	13	14	15	16	Total
Mark									

1. Fill in:

	Question	Answer
(a)	Write a multiple of 9 between 30 and 40.	
(b)	What is the highest common factor of 24 and 30?	
(c)	Write an odd square number less than 40.	
(d)	Calculate: $24 \div 6 + 2 \times 7$	
(e)	Calculate: $9 \times 4^0 + 3^3$	

(5 marks)

2. Carmen is on holiday in London. She wants to exchange €400 into British pounds (£). The exchange rate is £1.1369 for every Euro.

   (a) How many British pounds (£) will Carmen receive?

Ans: _____

   (b) Carmen spends £120 on train tickets.
   How much did she spend on train tickets in Euro?

Ans: _____

(4 marks)

3. (a) Write down the next two terms of the following sequence:

22, 15, 8, _____ , _____

(b) The diagram shows a sequence of figures made up of squares.

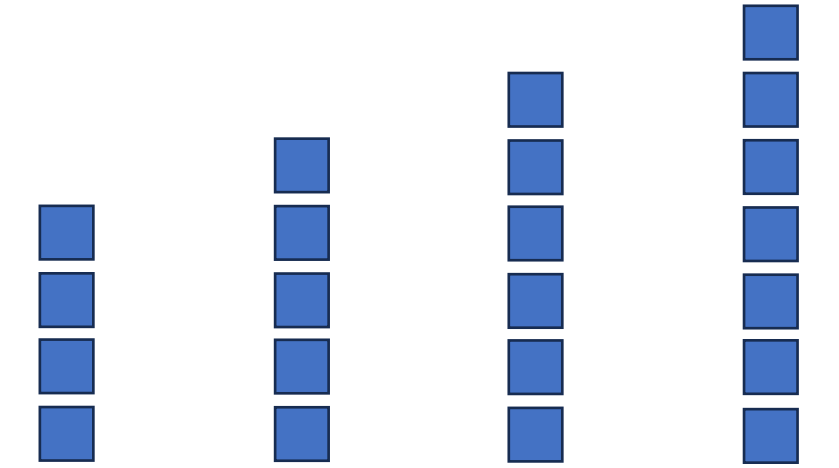

Figure 1 Figure 2 Figure 3 Figure 4

(i) Find an expression for the n^{th} term.

Ans: _____

(ii) How many squares are there in the 50^{th} figure?

Ans: _____

(3 marks)

4. (a) Simplify the ratio: $3.75 : \frac{1}{4}$

Ans: _____

(b) Alan, Ben and Clara share €288 in the ratio 2 : 3 : 7 respectively.
How many more Euro than Alan does Clara receive?

Ans: _____

(6 marks)

5. Patricia is preparing a fruit snack for her children. She picks two fruits at random, one from Crate A and another from Crate B.

Crate A contains an apple (A), a banana (B), a kiwi (K) and an orange (O).
Crate B contains an apple (A), a fig (F), a kiwi (K) and a pear (P).

(a) Fill in the possibility space below.

		Crate A			
		A	B	K	O
Crate B	A				
	F				
	K				
	P				

(b) Work out the probability that Patricia picks:

(i) an apple and a kiwi

Ans: _____

(ii) a fig

Ans: _____

(iii) no apples

Ans: _____

(5 marks)

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6. A new leather sofa costs €1400. The shop offers two payment plans.

Payment Plan 1	**Payment Plan 2**
15% OFF when paying CASH in FULL	Deposit of €500 + 12 instalments of €100 each

Two clients, Maria and Gianni, buy this new leather sofa. Maria chooses Payment Plan 1 as her payment plan, while Gianni chooses Payment Plan 2.
How much more does Gianni pay than Maria?

Ans: _____

(5 marks)

7.

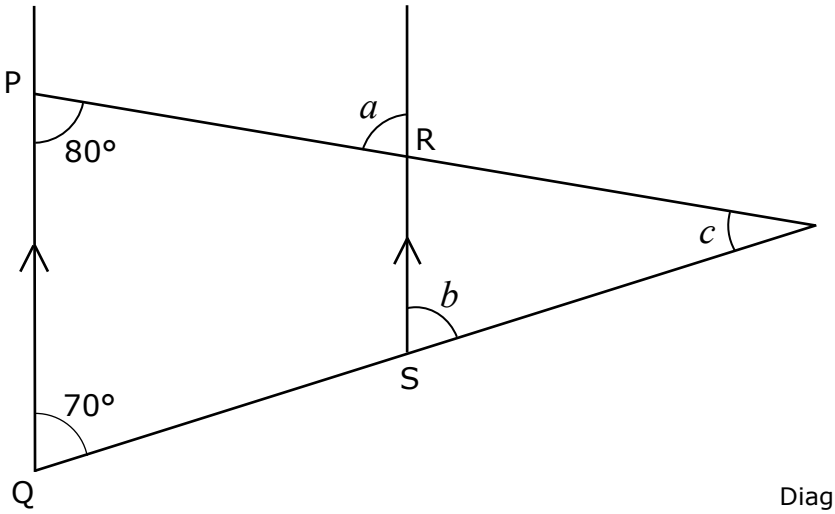


Diagram NOT to scale

PQ is parallel to RS. Find the size of the angles marked a, b and c, giving a reason for each answer.

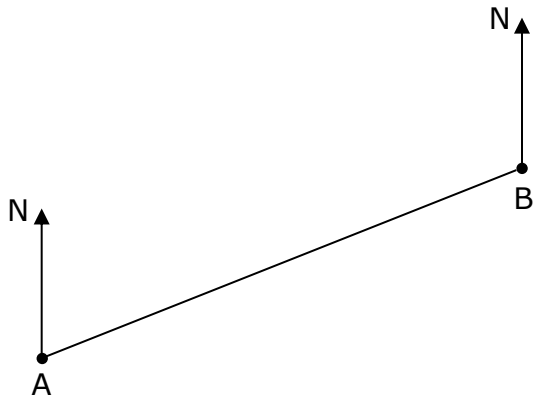
a = _____ Reason: _____

b = _____ Reason: _____

c = _____ Reason: _____

(6 marks)

8. Two ships, A and B, are located as on the map below.



(a) (i) On the map, mark the bearing of ship B from ship A.

(ii) Fill in:

The three figure bearing of ship B from ship A is _____ °.

(b) Ship C is on a bearing of 300° from ship A.
The distance of ship C from ship A on the map is 6 cm.

On the map, draw the accurate position of ship C.

(4 marks)

9. (a) Use the function $f(x) = 10x + 7$ to answer the questions below.

(i) Work out the value of $f(2)$.

Ans: _____

(ii) Solve $f(x) = 14$.

Ans: _____

(b) Line ST passes through the points S(−2, 4) and T(4, 1).

(i) Work out the gradient of line ST.

Ans: _____

(ii) The coordinates of the y-intercept of line ST are (0, 3).
Underline the correct equation of line ST:

(A) $y = -2x + 3$ (B) $y = 3 - \frac{1}{2}x$ (C) $y = 3x - 2$

(7 marks)

10. (a) Students in a secondary school study one science subject – Chemistry, Biology or Physics.

(i) $\frac{1}{8}$ of the students study Chemistry, while $\frac{1}{4}$ of the students study Biology. The rest study Physics. What fraction of the students study Physics?

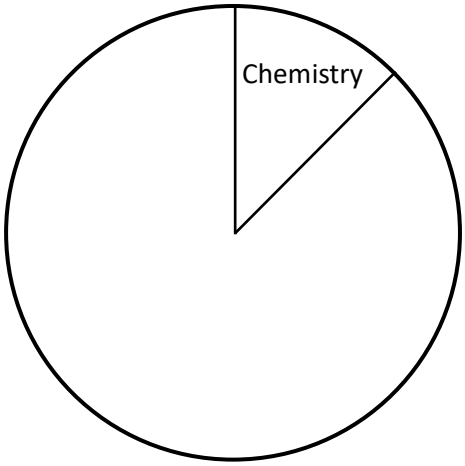
Ans: _____

(ii) There are 160 students in the school. How many students study Physics?

Ans: _____

(iii) The above information is to be shown on a pie chart.

Work out the angles representing Physics and Biology. Use these values to complete the pie chart.



Ans: Physics = _____; Biology = _____

(b) David sat for six tests and obtained the following marks:

51 , 68 , 72 , 84 , 92 , 76

David sat for a seventh test. His mean mark for all seven tests is 72.
What mark did David get in his seventh test?

Ans: _____

(9 marks)

11. (a) Expand and simplify: $3x + 4(9 - 2x) - 16$

Ans: _____

(b) Factorise completely: $15x^2y + 20xy^2$

Ans: _____

(c) Work out the value of the expression $\frac{12x}{3 - 7y^2}$ when $x = 3$ and $y = -1$.

Ans: _____

(6 marks)

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12. (a) Make x the subject of the formula: $k = \frac{V}{ax}$

Ans: _____

(b) Solve the simultaneous equations:

$$2x + 4y = 30$$
$$7x - 5y = -9$$

Ans: x = _____; y = _____

(6 marks)

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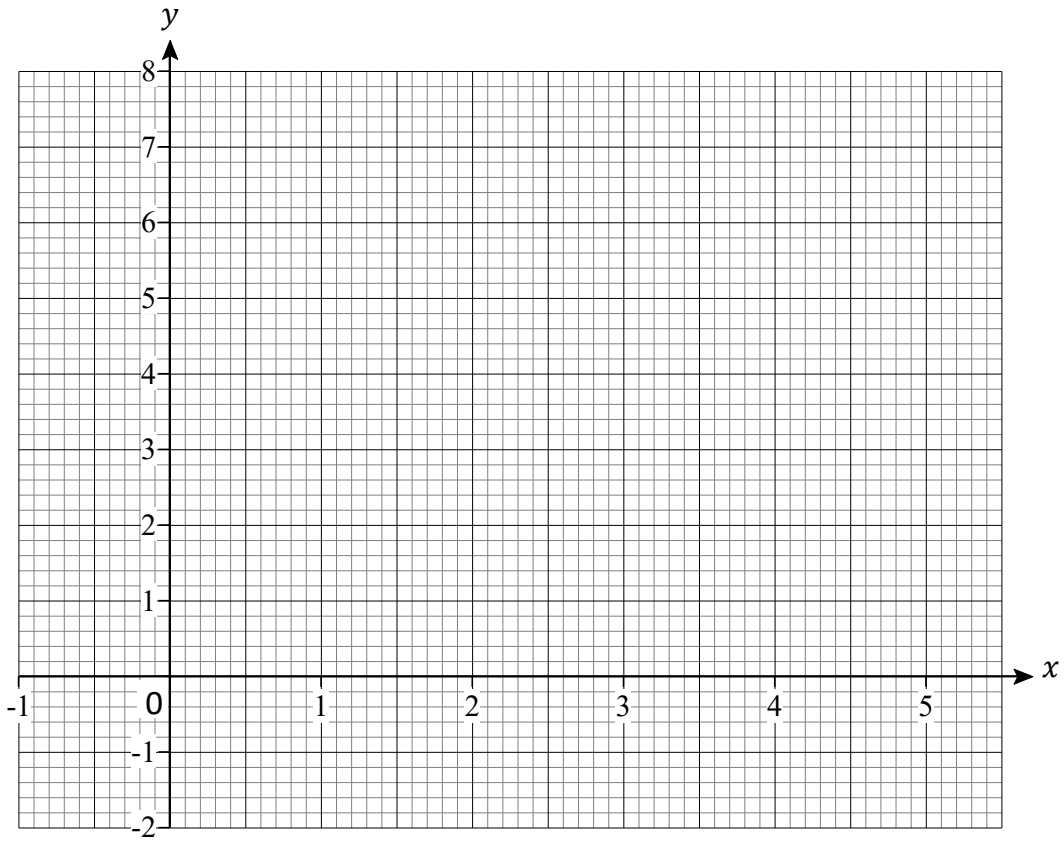
13. (a) Complete the table for the quadratic equation $y = x^2 - 4x + 3$, for the given values of x.

x	-1	0	1	2	3	4	5
x^2	1	0			9		25
$-4x$	4	0			-12		-20
+3	+3	+3	+3	+3	+3	+3	+3
y	8	3			0		8

(b) Plot the points and draw the graph of $y = x^2 - 4x + 3$.



(c) Fill in:

The minimum value of y is _____.

(d) What is the value of y when x is 3.5?

Ans: _____

(8 marks)

14. For a class project, pupils cut out four shapes – A, B, C, D. They assemble them to form an octagon as shown in the diagram below. Shapes A and D are trapeziums, shape B is a rectangle and shape C is a square.

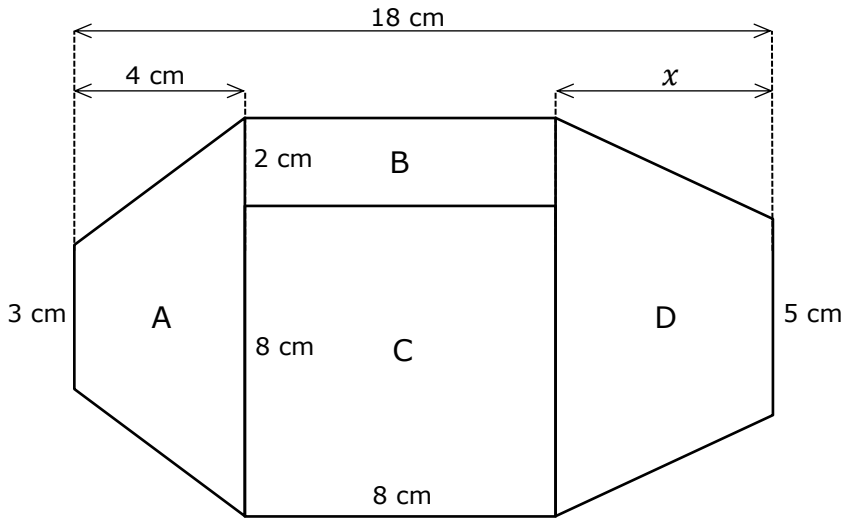


Diagram NOT to scale

(a) Calculate the area of rectangle B.

Ans: _____

(b) Work out the area of trapezium A.
(Hint: Area of trapezium = $\frac{1}{2}h(a+b)$*)*

Ans: _____

(c) Calculate the length x.

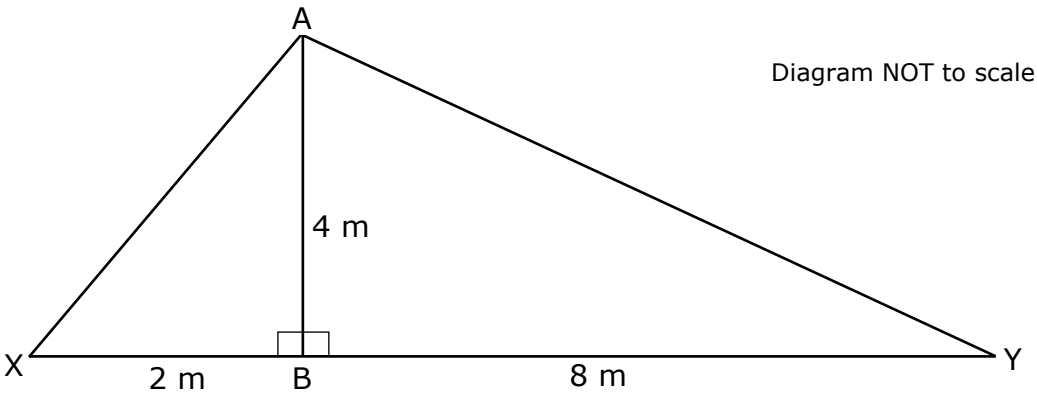
Ans: _____

(d) Work out the total area of the four shapes.

Ans: _____

(8 marks)

15. AB represents a flagpole. AX and AY represent two stretched ropes.



(a) Calculate the size of angle AYB.

Ans: _____

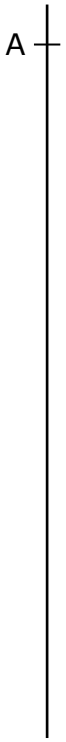
(b) Calculate the length of rope AY, correct to the nearest metre.

Ans: _____

(c) Show that triangles XBA and ABY are similar.

(9 marks)

16. In this question, use ruler and compasses only.



(a) Mark point B on the line such as AB = 7 cm.

(b) Construct the perpendicular bisector of line AB. Let the perpendicular bisector meet line AB at point X.

(c) (i) Construct an angle of 60° at point B such that ∠ABC is 60° and point C lies on the perpendicular bisector.
(ii) Join A to C to form ΔABC.

(d) (i) Measure the length of line CX.

Ans: _____

(ii) Work out the area of ΔABC.

Ans: _____

(9 marks)

End of Paper