



**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 November 2025

Subject: Mathematics
Date: 6th November 2025
Time: 16:00 – 17:30 (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. (a) Use the digits 6, 9, 2 and 5 to write the smallest possible **even** number.

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- (b) In the spaces below write the following numbers in order, starting with the smallest.

0.25 , $\frac{3}{8}$, $\frac{8}{25}$, 0.38 , 8%

_____ , _____ , _____ , _____ , _____

(3 marks)

2. Last week, Kayla spent $\frac{1}{4}$ of her pocket money on a take-away meal and she spent $\frac{5}{8}$ of her pocket money on an outing. She saved the remaining pocket money.

- (a) What fraction of the pocket money did Kayla spend?

Ans: _____

- (b) Kayla saved €5. How much pocket money did Kayla have?

Ans: _____

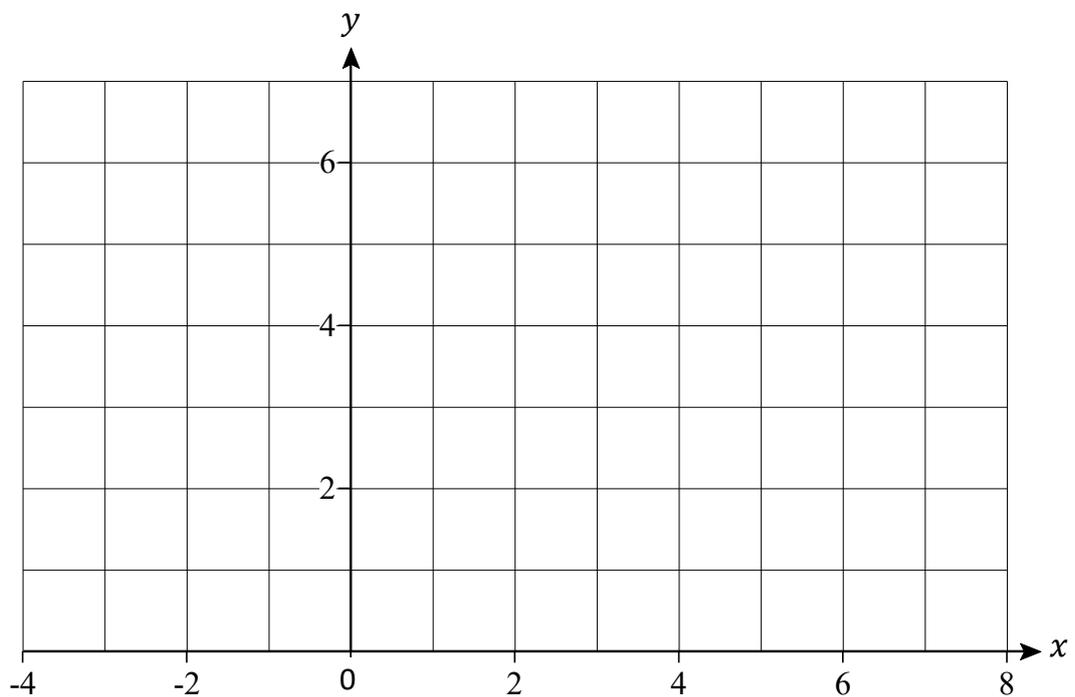
(5 marks)

3. A line passes through the points $P(-2, 1)$ and $Q(8, 6)$.

(a) Work out the gradient of line PQ.

Ans: _____

(b) (i) Plot the points P and Q on the grid below and draw the line PQ.



(ii) What is the y -intercept of line PQ?

Ans: _____

(c) Write down the equation of the line PQ.

Ans: _____

(5 marks)

4. (a) (i) Expand and simplify: $a(3a - 5b) + 4b(6a - 1)$

Ans: _____

(ii) Hence or otherwise, work out the value of $a(3a - 5b) + 4b(6a - 1)$ when $a = 2$ and $b = -3$.

Ans: _____

(b) Factorise completely: $16x^2y + 72xy^3$

Ans: _____

(7 marks)

5. Consider the sequence:

5, 9, 13, 17,

(a) What are the next two terms of the sequence?

Ans: _____, _____

(b) Write an expression for the n^{th} term of the sequence.

Ans: _____

(c) Work out the 35th term of the sequence.

Ans: _____

(5 marks)

6. (a) Paul wishes to buy lemonade for a party.

A packet of 12 lemonade cans costs €14.40 in Shop A.

A packet of 8 lemonade cans costs €10.00 in Shop B.

Paul buys 48 lemonade cans.

Which shop offers the better value and by how much?

Ans: _____

(b) In a hotel, the ratio of single rooms to twin rooms is 2 : 9.

The hotel has 72 twin rooms.

How many rooms does the hotel have in total?

Ans: _____

(c) Lara invested €15 000 at an interest rate of 1.8% per annum.

What is the amount of the investment at the end of the first year?

Ans: _____

(11 marks)

7. *In this question use ruler and compasses only.*

- (a) In the space below construct triangle ABC, such that $AB = 12$ cm, $AC = 8$ cm and $\widehat{BAC} = 60^\circ$.
- (b) Construct the perpendicular bisector of side AB.
- (c) Construct the perpendicular bisector of side AC.
Label the intersection of the two bisectors with the letter P.
- (d) Using point P as the centre, draw a circle that passes through all three vertices of triangle ABC.
- (e) Measure the radius of the circle drawn in part (d).

Ans: _____

(8 marks)

8. A gardener sows 30 flower seeds.

- (a) Out of the 30 seeds, 24 seeds sprout. What is the probability that a randomly chosen seed does **not** sprout?

Ans: _____

- (b) The 24 seeds that sprout produce one flower each.
There are 8 white, 4 yellow and 7 pink flowers. The rest are purple.

What is the probability that a flower picked at random is:

- (i) white?

Ans: _____

- (ii) purple?

Ans: _____

- (iii) blue?

Ans: _____

(5 marks)

9. (a) Make t subject of the formula: $p = \frac{xq}{rt^2}$

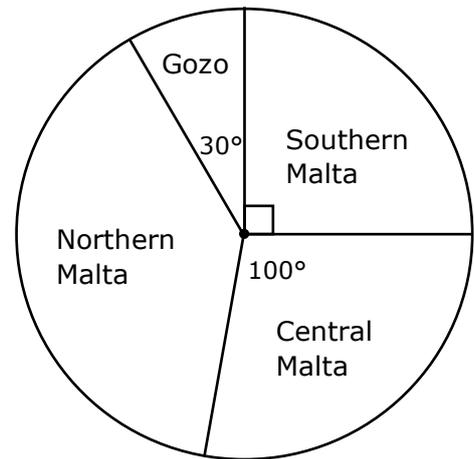
Ans: _____

- (b) Given the function $f(x) = 5x - 17$, work out the value of x when $f(x) = 8$.

Ans: _____

(5 marks)

10. (a) A club carried out a survey to find out which region its members are from. The results are shown in the pie chart.



(i) What is the size of the angle representing Northern Malta?

Ans: _____

(ii) Ninety-six members are from Southern Malta. What is the total number of members in this club?

Ans: _____

(iii) How many members are from Gozo?

Ans: _____

(b) Carol recorded the time in minutes that she spent on social media during a particular week. The table below shows the results.

Day	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Time in minutes	75	65	60	50	60	88	92

Use the table to work out:

(i) the mode;

Ans: _____

(ii) the mean;

Ans: _____

(iii) the median.

Ans: _____

(9 marks)

11. The diagram below shows a paved space in a public garden. It consists of a semicircular section and a trapezoidal section.

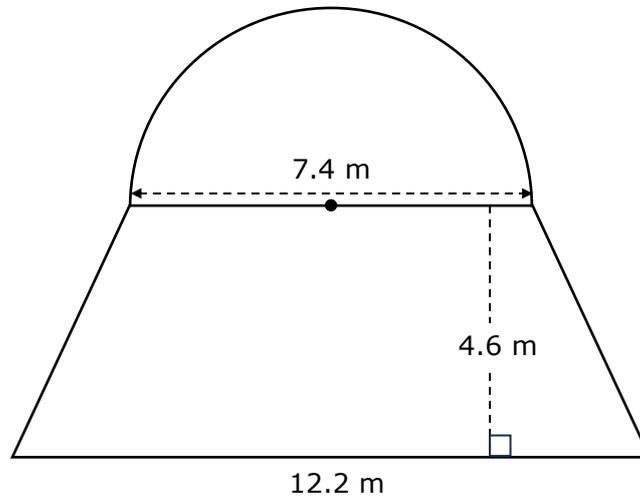


Diagram not drawn to scale

- (a) Work out the area of the semicircular section.

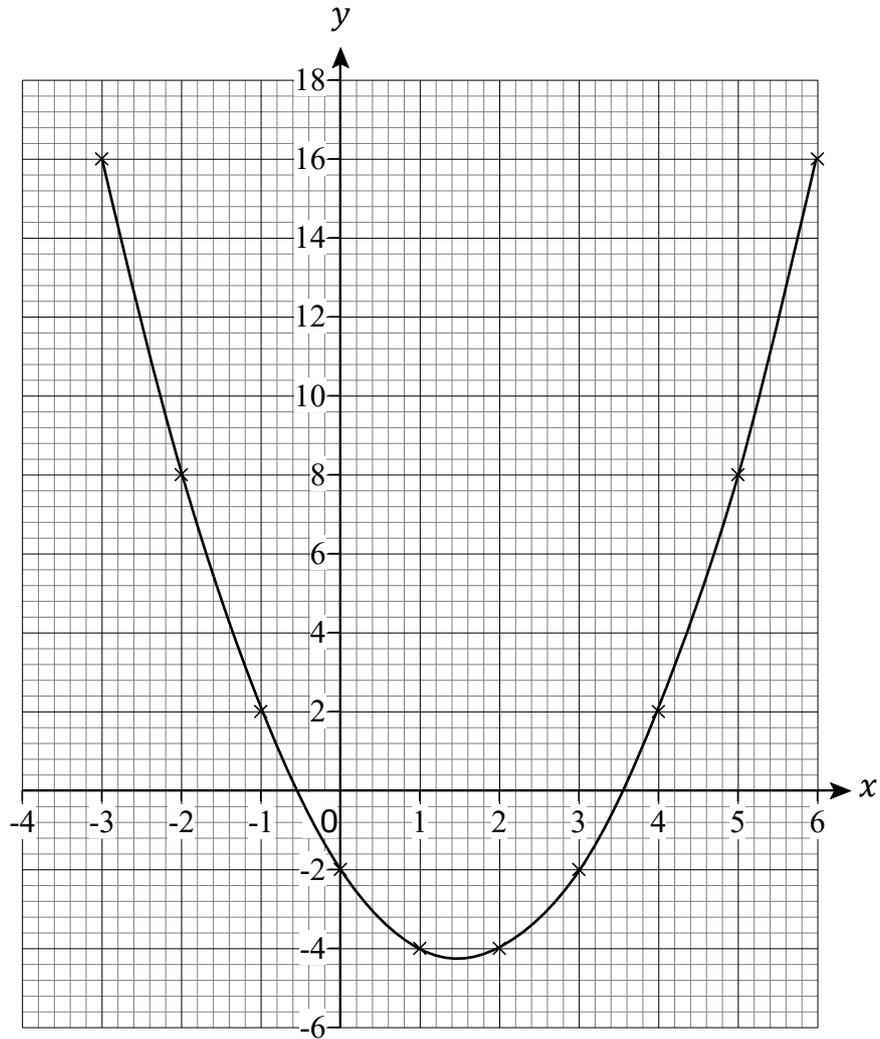
Ans: _____

- (b) Calculate the total area of the paved space.

Ans: _____

(5 marks)

12. The diagram shows the graph of $y = x^2 - 3x - 2$.



(a) Use the graph to find:

(i) the value of y when $x = 2$.

Ans: _____

(ii) the values of x when $y = 6$.

Ans: _____

(iii) the minimum value of y .

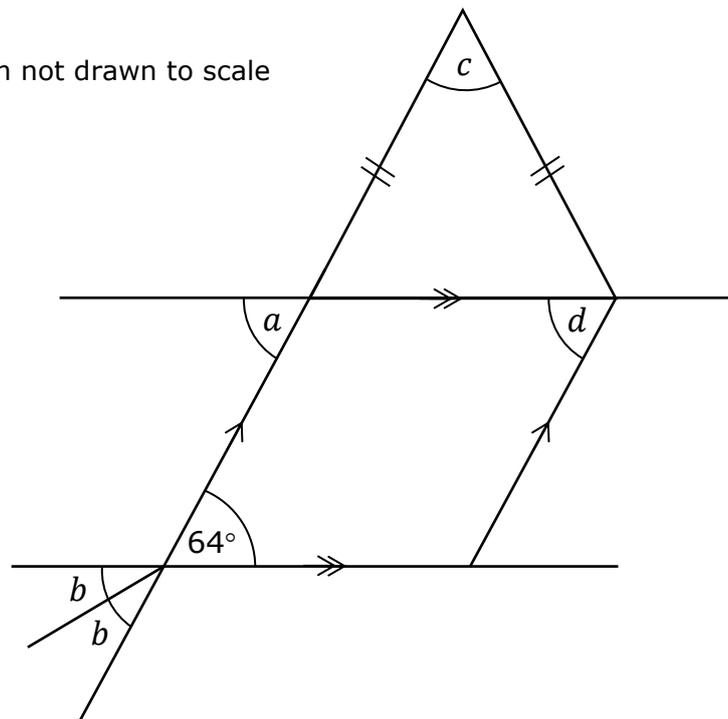
Ans: _____

(b) Draw the line of symmetry of the graph.

(5 marks)

13. Work out the size of angles a , b , c and d .

Diagram not drawn to scale



Ans: $a = \underline{\hspace{2cm}}$, $b = \underline{\hspace{2cm}}$, $c = \underline{\hspace{2cm}}$, $d = \underline{\hspace{2cm}}$

(6 marks)

14. (a) A ruler is 25 cents more expensive than a pen.
Let r represent the cost of a ruler **in cents** and let p represent the cost of a pen **in cents**.

(i) Write down an equation representing this information.

Ans: _____

(ii) The price of 4 rulers and 5 pens is €15.40.

Write down another equation in terms of r and p **in cents**.

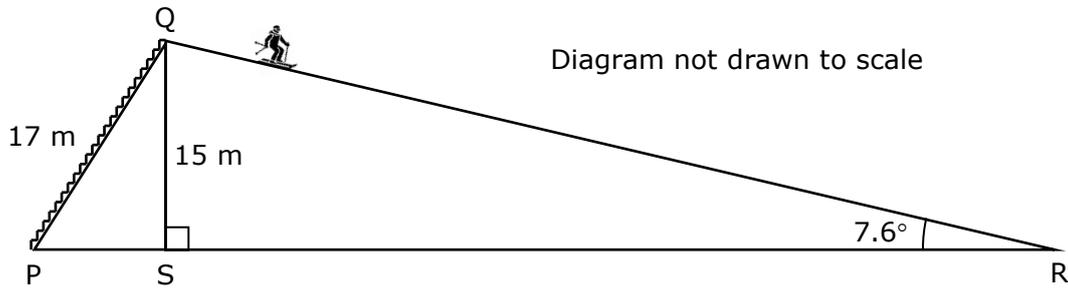
Ans: _____

(b) Solve these two equations simultaneously to find the cost of one ruler and the cost of one pen.

Ans: ruler = _____; pen = _____

(6 marks)

15. The diagram shows the staircase, PQ, leading to the slide, QR, used in a skiing competition. QPR is a triangle and QS is the height of the triangle.



- (a) Work out the size of angle QPS. Give your answer correct to 1 d.p.

Ans: _____

- (b) Calculate the length PS.

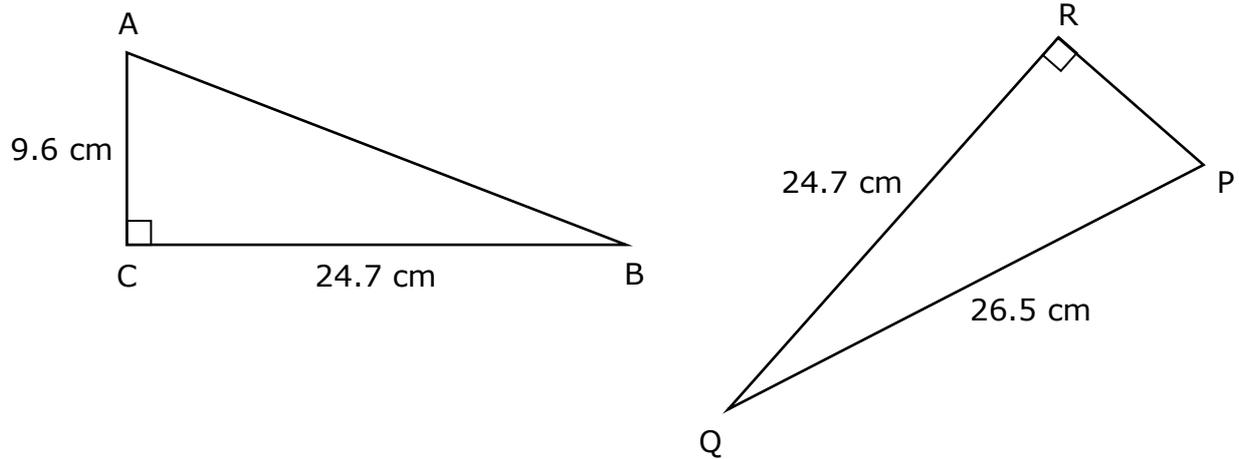
Ans: _____

- (c) Calculate the length PR.

Ans: _____

(9 marks)

16. The diagram below shows two triangles ABC and PQR.



Diagrams not drawn to scale

(a) Calculate the length of AB in triangle ABC.

Ans: _____

(b) Show that triangle ABC is congruent to triangle PQR.

(6 marks)

End of Paper

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