



**Examination for the Enlistment of Soldiers  
in the Armed Forces of Malta  
(Regular Force)  
2023**

**Subject: Mathematics**

**Date: 15<sup>th</sup> September 2023**

**Time: 09.00 – 10.30 (One and a half hours)**

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**Instructions to candidates:**

- This examination paper consists of THREE sections: A, B and C. Answer all 50 questions in these sections.
- Each question contains four possible answers, but only ONE is correct.
- Enter your answers on the Answer Sheet provided. Mark ONLY the correct answer by using a pencil.

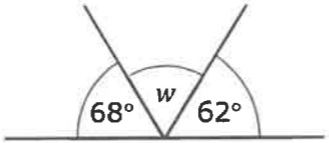
e.g. If answer C is selected, fill in the appropriate circle as shown below.

50.	<input type="radio"/> A	<input type="radio"/> B	<input checked="" type="radio"/> C	<input type="radio"/> D
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- Each question carries two (2) marks.
- Diagrams are NOT drawn to scale.
- The use of calculators is allowed.

**Section A**

**This Section includes twenty (20) questions (from 1 to 20).  
Answer ALL questions.**

1	What is 28.689 correct to 2 decimal places?	A) 29	B) 28.69	C) 28.70	D) 28
2	Convert 3.54 km to m.	A) 354 m	B) 35 400 m	C) 3540 m	D) 3500 m
3	Simplify: $\frac{8}{120}$	A) $\frac{8}{12}$	B) $\frac{2}{15}$	C) $\frac{1}{12}$	D) $\frac{1}{15}$
4	A flight from leaves Malta at 2.35 pm. What is this time in 24-hour clock format?	A) 02:35	B) 12:35	C) 04.35	D) 14:35
5	Work out the value of $w$ .				
6	A boat is at sea sailing towards NW. It turns clockwise by a quarter turn. In which direction is it sailing now?	A) N	B) W	C) NE	D) SW
7	Which one of these numbers is prime? 45    31    57    87	A) 31	B) 45	C) 57	D) 87

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46	London is 5 hours ahead of New York. An aeroplane leaves London at 04:30 for an eight-and-a-half-hour flight to New York. What is the time in New York when the aeroplane lands?		
A) 18:00	B) 13:00	C) 01:30	D) 08:00
47	Work out: $3^3 - \sqrt{49} + 8 \times 1.5$		
A) 32	B) 45.5	C) 14	D) 19.2
48	Tiziana works a basic 40-hour week at €15 per hour. She is paid 'double rate' for overtime. In a particular week, she worked a total of 50 hours. Calculate her total pay for this week.		
A) €900	B) €1500	C) €600	D) €750
49	Make $a$ the subject of the formula: $2r + 5 = 7 - 3a$		
A) $\frac{2r-2}{3}$	B) $\frac{12-2r}{3}$	C) $\frac{2-3r}{2}$	D) $\frac{2-2r}{3}$
50	These are the ages of a group of six people, aged over 50. $58 \quad 66 \quad x \quad 52 \quad 67 \quad 64$ The range of their ages is 19. What is the value of $x$ ?		
A) 54	B) 71	C) 86	D) 77

10 x 2 marks = **20 marks**

**TOTAL: 100 MARKS**

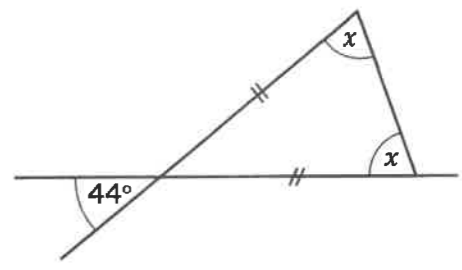
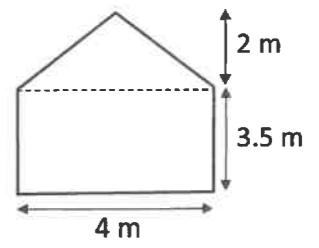
8	Calculate the volume of a cube of side 15 cm.		
A) 225 cm <sup>3</sup>	B) 3375 cm <sup>3</sup>	C) 15 000 cm <sup>3</sup>	D) 625 cm <sup>3</sup>
9	A regular shape with six lines of symmetry is called:		
A) a pentagon	B) a hexagon	C) an octagon	D) a decagon
10	A shop keeper has 20 lamps in stock. Two of the lamps are chrome, twelve are bronze and six are black. The probability that a lamp picked at random is black is:		
A) very likely	B) certain	C) evens	D) unlikely
11	Express 24% as a fraction in its simplest form.		
A) $\frac{6}{20}$	B) $\frac{6}{25}$	C) $\frac{12}{50}$	D) $\frac{6}{50}$
12	Twenty-five is <b>not</b> a factor of:		
A) 50	B) 75	C) 90	D) 125
13	There are 120 people at a meeting. Of these, 65% are senior citizens. How many senior citizens are there at the meeting?		
A) 78	B) 65	C) 55	D) 42
14	Simplify: $4(x - 5) - 3$		
A) $4x + 23$	B) $4x + 8$	C) $4x - 8$	D) $4x - 23$

15	Write $\frac{2}{5}$ in decimal form.	A) 0.2	B) 0.4	C) 0.5	D) 0.25
16	Express the ratio 45 g : 1 kg in its simplest form.	A) 45 : 1	B) 9 : 500	C) 45 : 1000	D) 9 : 200
17	What is the y-intercept of the line $2y = 6x + 5$ ?	A) 6	B) 5	C) 2.5	D) 3
18	Carl and Petra share €880 in the ratio of 5 : 6 respectively. What is Petra's share?	A) €480	B) €550	C) €660	D) €400
19	How many 200 ml glasses of water can be filled completely from a 2.5 litre bottle?	A) 13 glasses	B) 12 glasses	C) 11 glasses	D) 15 glasses
20	The following are the prices of five apartments situated in Naxxar: €215 000    €410 000    €340 000    €275 000    €240 000 What is the median price?	A) 195 000	B) 296 000	C) €275 000	D) 312 500

20 x 2 marks = **40 marks**

**Section C**

**This Section includes ten (10) questions (from 41 to 50). Answer ALL questions.**

41	Which one of the following is incorrect? A) $0.75 = \frac{3}{4}$ B) $17 > 4^2$ C) $3.142 < 3\frac{1}{3}$ D) $\sqrt{50} > 5 \times 1.5$
42	Work out the value of $x$ . 
43	Work out the value of $m$ when $p = 6$ and $q = \frac{1}{2}$ . $m = 3p^2 + 8q$ A) 40    B) 112    C) 52    D) 328
44	Which one of the following lines is parallel to the line $y = \frac{1}{3}x - 5$ ? A) $y = 3x - 1$ B) $y = 2x - 5$ C) $y = x - 3$ D) $3y = x - 6$
45	The following is a diagram of a wall which needs to be painted. Work out the area of the wall. 
	A) 17.5 m <sup>2</sup> B) 22 m <sup>2</sup> C) 18 m <sup>2</sup> D) 18.5 m <sup>2</sup>

37 What is the Least Common Multiple of 4, 10 and 24?

- A) 2                      B) 60                      C) 120                      D) 240

38 Which one of the following points is on the line  $y = 3x - 2$ ?

- A) (-1, 5)                      B) (-1, -5)                      C) (1, -1)                      D) (1, 5)

39 Fred spends 85 GBP (Great Britain Pound) on a ticket to watch a musical. How much did he spend in euro if the exchange rate is €1.15 for 1 GBP?

- A) €97.75                      B) €86.15                      C) €83.85                      D) €73.91

40 The audience at a concert is made up of adults and children. The ratio of adults to children is 2 : 3. There are 240 children in the audience. How many adults are in the audience?

- A) 180 adults                      B) 160 adults                      C) 400 adults                      D) 200 adults

20 x 2 marks = **40 marks**

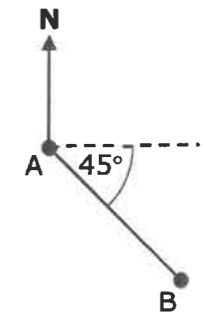
### Section B

This Section includes twenty (20) questions (from 21 to 40). Answer ALL questions.

21 What is 0.64 as a fraction in its simplest form?

- A)  $\frac{32}{50}$                       B)  $\frac{64}{100}$                       C)  $\frac{16}{25}$                       D)  $\frac{32}{100}$

22 What is the bearing of Town B from Town A?



- A) 45°                      B) 135°                      C) 225°                      D) 325°

23 At a clinic, 6 women, 8 men, 2 girls and 4 boys have all been given the same appointment time. A person is called at random. What is the probability that the first person to be called is a male?

- A)  $\frac{1}{5}$                       B)  $\frac{4}{5}$                       C)  $\frac{3}{10}$                       D)  $\frac{3}{5}$

24 On a map, a distance of 1.2 cm represents 12 km. What is the scale of the map?

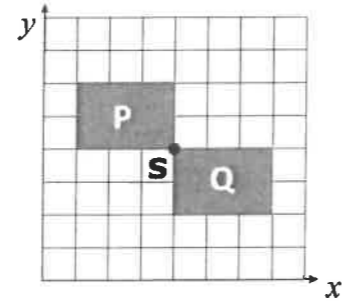
- A) 1 : 1 000 000                      B) 1 : 100 000                      C) 1 : 1000                      D) 1 : 10

25 A running track is 400 m long. An athlete runs three times round the track. How many kilometres does she run?

- A) 1.2 km                      B) 12 km                      C) 120 km                      D) 1200 km

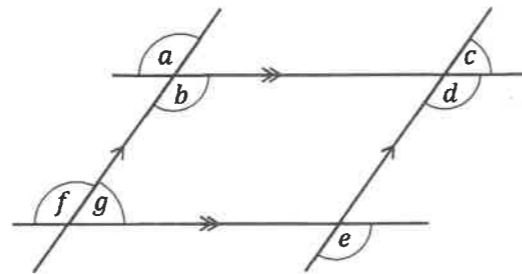
26 Shape P is rotated about point S to form Shape Q.  
Shape P has been rotated by:

- A) 270° anticlockwise
- B) 90° clockwise
- C) 180° clockwise
- D) 270° clockwise



27 Which of the following pairs of angles are corresponding angles?

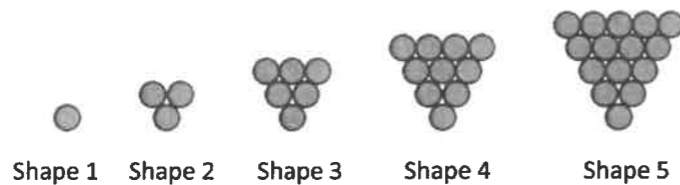
- A)  $g$  and  $d$
- B)  $a$  and  $c$
- C)  $b$  and  $e$
- D)  $a$  and  $f$



28 Tonio earns a gross pay of €3460 per month. In August 24% of his gross pay was deducted for Income Tax and Social Security Contribution. What was his net pay in August?

- A) €3436
- B) €830.40
- C) €2629.60
- D) €3484

29 How many circles will shape 8 have?



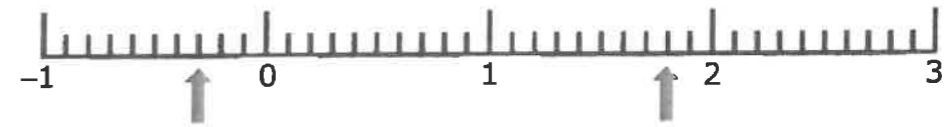
- A) 33
- B) 34
- C) 35
- D) 36

30 Which one of the following is the smallest?

$22 \div 7$      $3.5$      $0.3 \times 10^2$      $\frac{10}{3}$

- A) 3.5
- B)  $22 \div 7$
- C)  $0.3 \times 10^2$
- D)  $\frac{10}{3}$

31 What is the difference between the values indicated by the two arrows?



- A) 1.5
- B) 2.1
- C) 0.1
- D) 0.9

32 A flight ticket originally cost €120. Carl saved €36 when he bought the ticket during an offer. What percentage of the original cost did he save?

- A) 30%
- B) 12%
- C) 36%
- D) 43.2%

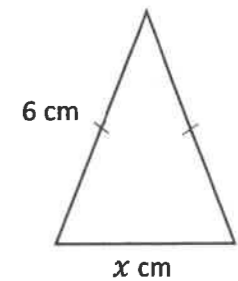
33 Solve:  $6(x - 4) = 2x + 6$

- A) 2.38
- B) 4
- C) 7.5
- A) 5.5

34 Which one of the following quadrilaterals has just one pair of parallel sides?

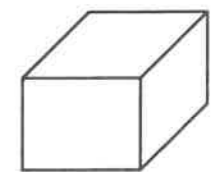
- A) a rhombus
- B) a kite
- C) a square
- D) a trapezium

35 The perimeter of this isosceles triangle is 16 cm. What is the value of  $x$ ?



- A) 6 cm
- B) 4 cm
- C) 10 cm
- D) 8 cm

36 Work out the total surface area of a cuboid of sides 4 cm by 5 cm by 3 cm.



- A) 47 cm<sup>2</sup>
- B) 60 cm<sup>2</sup>
- C) 49 cm<sup>2</sup>
- D) 94 cm<sup>2</sup>