



Examination for the Enlistment of Soldiers in the Armed Forces of Malta

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Subject: Mathematics

Date: 20 February 2020

Time: 09.00 – 10.00 (One hour)

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.

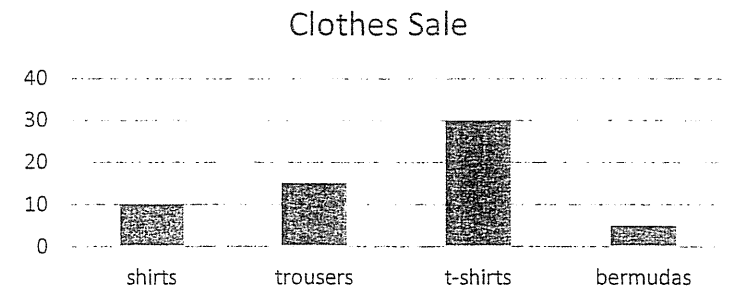
Section A

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

1	Add 568 and 295.	A) 853	B) 863	C) 753	D) 763
2	A cheese toast costs €1.30. How much do 6 cheese toasts cost?	A) €6.30	B) €7.30	C) €6.80	D) €7.80
3	Simplify the ratio 18 : 36	A) 3 : 5	B) 12 : 30	C) 1 : 2	D) 2 : 3
4	Change 1.25 km into metres.	A) 1250 m	B) 125 m	C) 12.5 m	D) 0.125 m
5	Work out: $\frac{1}{6}$ of 138.	A) 12	B) 24	C) 21	D) 23
6	A string 1.92 m long is cut into three equal pieces. The length of each piece is:	A) 5.76 m	B) 0.64 m	C) 3.84 m	D) 1.62 m
7	Which set of numbers is in ascending order?	A) 1.97 , 1.83 , 0.96 , 1.44	B) 1.07 , 1.23 , 1.86 , 1.68	C) 0.05 , 0.17 , 0.28 , 0.56	D) 0.57 , 0.39 , 0.21 , 0.15

END OF PAPER

47 What percentage of the clothes sale were t-shirts?



- A) 25% B) 2% C) 8% D) 50%

48 The frequency table shows the number of rooms in all the houses in a street. How many houses have less than seven rooms?

Number of rooms	1-3	4-6	7-9	10-12	13-15
Frequency	2	7	5	3	0

- A) 2 B) 7 C) 14 D) 9

49 A bag contains all the numbers from 7 to 20. One number is picked at random. What is the probability that the number is a multiple of 4?

- A) $\frac{3}{7}$ B) $\frac{2}{7}$ C) $\frac{5}{14}$ D) $\frac{3}{14}$

50 €299 are shared among Tom, Rose and Charlie in the ratio 2:4:7. How much will Charlie get?

- A) €161 B) €92 C) €46 D) €138

10 x 2 marks = **20 marks**

TOTAL: 100 MARKS

8 $\frac{1}{5}$ is equivalent to:

- A) 5% B) 10% C) 20% D) 25%

9 A film starts at 21:30 and finishes at 00:20. How long is the film?

- A) 2 hr 50 min B) 3 hr 50 min C) 2 hr 40 min D) 3 hr 20 min

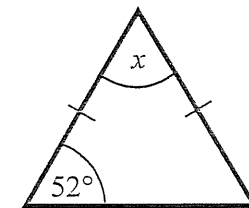
10 Work out $13 \times 2 + 17 - 5$.

- A) 182 B) 38 C) 27 D) 42

11 Simplify $9b + 7 - 4b - 3$

- A) $13b - 4$ B) $5b - 4$ C) $5b + 10$ D) $5b + 4$

12 Calculate value of the angle marked x .



- A) 52° B) 76° C) 90° D) 104°

13 What is the median of the following set of numbers:

16, 11, 16, 14, 19, 13

- A) 8 B) 16 C) 15 D) 19

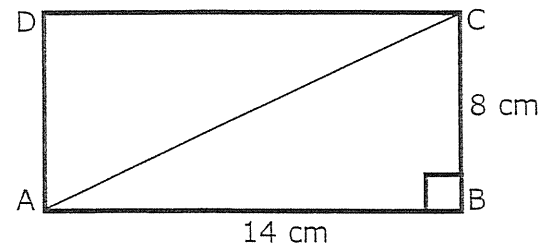
14 Work out: $\frac{3}{5} \div \frac{6}{5}$

- A) $\frac{1}{2}$ B) $\frac{18}{25}$ C) $\frac{18}{5}$ D) $\frac{9}{25}$

15 Work out 30% of €640.

- A) €610 B) €213 C) €192 D) €832

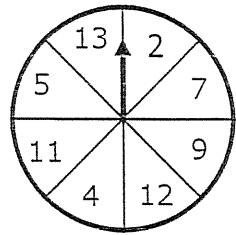
16 Work out the area of shape ABC.



- A) 44 cm^2 B) 56 cm^2 C) 112 cm^2 D) 22 cm^2

17 John spins the wheel. The probability that the arrow points to an even number is:

- A) $\frac{1}{2}$
 B) $\frac{2}{8}$
 C) $\frac{5}{8}$
 D) $\frac{3}{8}$



18 A shape with 8 sides is called:

- A) a pentagon B) an octagon C) a hexagon D) a decagon

19 Find the value of $5p + 3q$ when $p = 3$ and $q = 2$.

- A) 8 B) 18 C) 13 D) 21

20 A shape has no lines of reflective symmetry and order of rotational symmetry 2. The shape is:

- A) a rectangle B) a rhombus C) a parallelogram D) a square

20 x 2 marks = **40 marks**

Section C

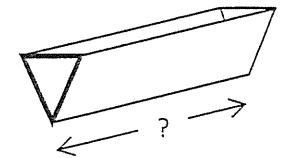
This Section contains ten (10) questions (from 41 to 50).
 Answer ALL questions.

41 The surface area of a cube is 150 cm^2 . What is the volume of the cube?

- A) 125 cm^3 B) 300 cm^3 C) 5.31 cm^3 D) 12.5 cm^3

42 A water trough has the shape of a triangular prism. It has a capacity of 82 litres. What is the length of the water trough given that the cross-sectional area is 400 cm^2 ?

(1 litre = 1000 cm^3)



- A) 48.7 cm B) 20.5 cm C) 205 cm D) 70 cm

43 The temperature in London is -3°C . The temperature in Moscow on the same day is -15°C . What is the temperature difference?

- A) 45°C B) 18°C C) -18°C D) 12°C

44 The first term of a sequence is 3. Each term is twice the previous term. What is the fourth term?

3, _____, _____, _____?

- A) 18 B) 24 C) 9 D) 81

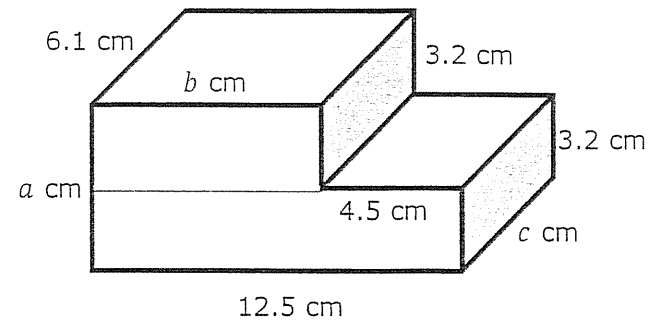
45 Simplify $3a - 4b - 2a - b + a$

- A) $-5b$ B) $2a - 3b$ C) $2a + 5b$ D) $2a - 5b$

46 The formula for the perimeter P of a rectangle of length l and breadth b is:

- A) $P = l + b$ B) $P = 2(l + b)$ C) $P = lb$ D) $P = 2l + b$

38 Find the value of a , b and c in the given diagram.



- A) $a = 6.1$ cm, $b = 8$ cm, $c = 6.1$ cm
- B) $a = 6.4$ cm, $b = 8$ cm, $c = 6.1$ cm
- C) $a = 8$ cm, $b = 8$ cm, $c = 6.1$ cm
- D) $a = 6.4$ cm, $b = 8$ cm, $c = 6.4$ cm

39 A tablet costs 364 GBP (Great Britain Pound). Taking 1 GBP = €1.35, calculate the cost of the tablet in euro.

- A) €269.63
- B) €546.00
- C) €491.40
- D) €490.00

40 Katy earns a salary of x euro per month. She also earns y euro per month from her part-time job. How much money does Katy earn in **one year**, in euro?

- A) $12(x + y)$
- B) $12(x + 4y)$
- C) $12x + y$
- D) $x + 4y$

20 x 2 marks = **40 marks**

Section B

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

21 Find the value of $2 \times (10 - 6)$

- A) -8
- B) 12
- C) 10
- D) 8

22 Use your calculator to work out the value of $\frac{35 \times 23}{72 - 26}$

- A) 11.2
- B) -14.8
- C) 17.5
- D) 0.39

23 A car left Town A at 23:20 and reached Town B after 4 h 17 mins. At what time did the car arrive at Town B?

- A) 4.20 am
- B) 3.37 am
- C) 3.53 am
- D) 4.10 am

24 Round 6488 to the nearest 100.

- A) 6400
- B) 7000
- C) 6500
- D) 6600

25 Harry's camera captures 15 pictures in 1 minute. How many pictures does the camera capture in 8 seconds?

- A) 4
- B) 2
- C) 6
- D) 3

26 Convert 72% to a fraction in its simplest form.

- A) $\frac{13}{27}$
- B) $\frac{19}{25}$
- C) $\frac{19}{26}$
- D) $\frac{18}{25}$

27 Complete the sequence 33, 41, 49, ____, ____.

- A) 56, 63 B) 57, 65 C) 58, 67 D) 58, 65

28 A supermarket chain employs cashiers and shelf stackers in the ratio 2 : 5. There are 168 cashiers and shelf stackers in total. Calculate the number of cashiers employed.

- A) 48 B) 96 C) 84 D) 24

29 Julian measures the height of five trees. 198 cm, 153 cm, 138 cm, 178 cm, 198 cm. Find the mean height.

- A) 198 cm B) 178 cm C) 173 cm D) 60 cm

30 Work out: $\frac{36}{8} \times \frac{16}{9}$

- A) 4 B) 6 C) 12 D) 8

31 The price of a gold necklace increased from €800 to €1160. Calculate the percentage increase in price.

- A) 40% B) 45% C) 42% D) 46%

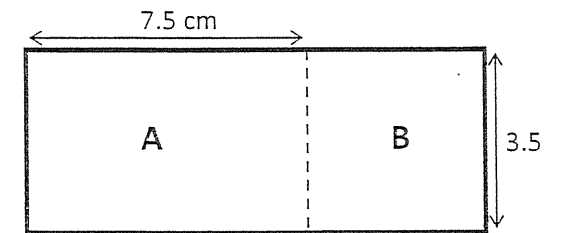
32 The temperature in the morning is -3°C . By noon the temperature rises by 8°C . What is the temperature at noon?

- A) -11°C B) 8°C C) 4°C D) 5°C

33 In a garden, $\frac{1}{4}$ of the area is paved, $\frac{2}{5}$ of the area is a lawn and the remainder is a flowerbed. What fraction of the garden is a flowerbed?

- A) $\frac{7}{20}$ B) $\frac{13}{20}$ C) $\frac{3}{20}$ D) $\frac{6}{9}$

34 The shape below is made up of rectangle A and square B. Find the area of the whole shape.



- A) 38.5 cm^2 B) 26.5 cm^2 C) 91.9 cm^2 D) 29 cm^2

35 Find the value of C , when $a = 4$ and $b = 1$, given that $C = a + 3(a - b)$.

- A) 19 B) 13 C) 35 D) 21

36 A quadrilateral has angles of 45° , 136° , 125° and x° . Find the value of x .

- A) 44° B) 45° C) 54° D) 55°

37 Place these fractions in ascending order: $\frac{5}{7}$, $\frac{37}{70}$, $\frac{24}{35}$, $\frac{3}{5}$

A) $\frac{37}{70}$, $\frac{3}{5}$, $\frac{24}{35}$, $\frac{5}{7}$

B) $\frac{3}{5}$, $\frac{5}{7}$, $\frac{24}{35}$, $\frac{37}{70}$

C) $\frac{37}{70}$, $\frac{3}{5}$, $\frac{5}{7}$, $\frac{24}{35}$

D) $\frac{3}{5}$, $\frac{24}{35}$, $\frac{37}{70}$, $\frac{5}{7}$