



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

2021

Subject: Mathematics

Time: 09.00 – 10.00 (One hour)

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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

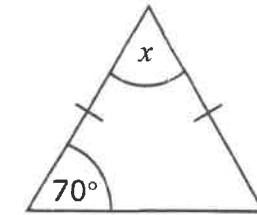
**This Section contains twenty (20) questions (from 1 to 20).
Answer ALL questions.**

1	Subtract 189 from 735.	A) 924	B) 546	C) - 546	D) 541
2	Work out $7(3.5 + 2.5)$.	A) 27	B) 42	C) 21	D) 7
3	The length of a laptop is 36.5 cm. Write this length in mm.	A) 365 mm	B) 3.65 mm	C) 0.365 mm	D) 36.5 mm
4	Simplify the ratio 108 : 136	A) 18 : 24	B) 12 : 30	C) 27 : 34	D) 9 : 46
5	Which fraction is equal to $\frac{3}{4}$?	A) $\frac{12}{18}$	B) $\frac{12}{20}$	C) $\frac{18}{24}$	D) $\frac{6}{9}$
6	Three diaries cost €21.75. What is the cost of one diary?	A) €7.50	B) €7.25	C) €7.00	D) €7.30
7	Simplify: $11x + 8 - 6x - 3$	A) $17x - 5$	B) $5x - 5$	C) $5x + 11$	D) $5x + 5$
8	Work out $\frac{1}{7}$ of 112.	A) 16	B) 14	C) 12	D) 18

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End of Paper

9 Calculate the value of angle x .



- A) 70° B) 90° C) 140° D) 40°

10 A box contains 125 clips. How many clips are there in five boxes?

- A) 25 B) 130 C) 625 D) 500

11 Solve: $4x - 12 = 8$

- A) 5 B) 1 C) 4 D) 16

12 A bus leaves Valletta at 08:30 and takes 45 minutes to arrive at Paola. At what time does it arrive at Paola?

- A) 09:15 B) 09:30 C) 09:00 D) 09:45

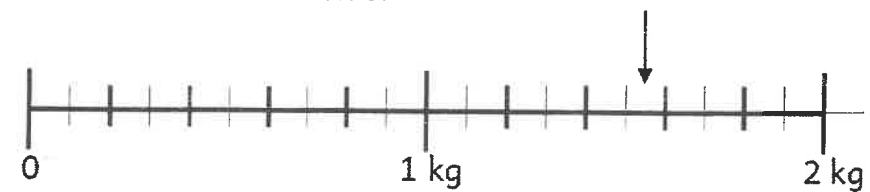
13 Express 2 kg as a percentage of 10 kg.

- A) 10% B) 20% C) 25% D) 50%

14 Work out $\frac{1}{6} \times \frac{3}{5}$

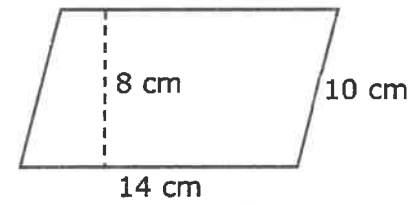
- A) $\frac{1}{10}$ B) $\frac{3}{5}$ C) $\frac{1}{30}$ D) 1

15 The arrow shows the value:



- A) 1.45 kg B) 1.5 kg C) 1.55 kg D) 1.60 kg

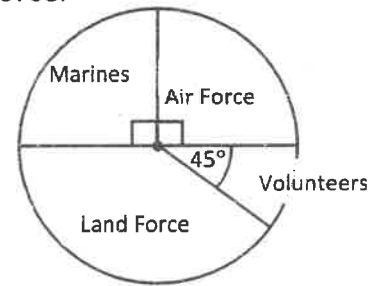
16 Work out the area of the parallelogram.



- A) 140 cm^2 B) 112 cm^2 C) 1120 cm^2 D) 32 cm^2

17 Work out the angle representing the Land Force.

- A) 270°
 B) 180°
 C) 110°
 D) 135°



18 What is the mode of the following set of numbers:

16, 11, 16, 14, 16, 19, 13

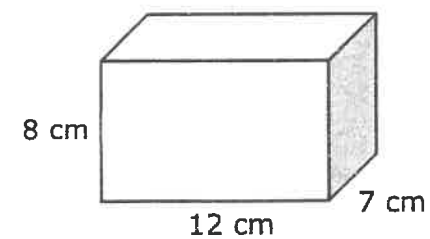
- A) 8 B) 15 C) 16 D) 19

19 Which set of numbers has all the factors of 18?

- A) 1, 2, 6, 12, 15, 18
 B) 2, 4, 6, 12, 16, 18
 C) 1, 2, 3, 6, 9, 18
 D) 2, 4, 6, 8, 16, 18

20 Calculate the volume of the cuboid.


- A) 54 cm^2
 B) 152 cm^2
 C) 336 cm^2
 D) 672 cm^2


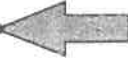




20 x 2 marks = 40 marks

46 When a man drives in town, his car does 10.4 km per litre of petrol. He starts on a full tank of 55 litres and drives for 143 km in town. How much petrol has he left in the tank?

- A) 44.6 litres B) 132.6 litres C) 88 litres D) 41.25 litres

47 The arrow  is rotated 90° anticlockwise about point P? Which of the following shows the new position of the arrow?

- A)  B)  C)  D) 

48 Solve the equation $3x - 17 = 7 - 5x$

- A) $x = 3$ B) $x = 2$ C) $x = 0$ D) $x = 5$

49 Given that $y \geq 5$, which of the following is false?

- A) $y = 5$ B) $y = 4.99$ C) $y = 7$ D) $y = 5.01$

50 The following costs of manufacturing a motorcycle are represented in a pie chart. Materials: €2880; Labour: €1920; Overheads €960. The angle representing Labour is:

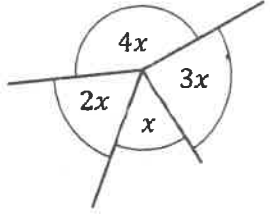
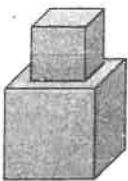
- A) 180° B) 240° C) 50° D) 120°

10 x 2 marks = 20 marks

TOTAL: 100 MARKS

Section C

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

41	The value of x is:			
	A) 60°	B) 72°	C) 36°	D) 200°
42	$\frac{2}{5}$ of $\frac{3}{4}$ is:			
	A) 0.3	B) 0.3	C) 0.33	D) 3.3
43	The mean and median of the numbers 2, 5, 5, 6, 8, 16, 21 are, respectively:			
	A) 5 and 7	B) 9 and 5	C) 6 and 9	D) 9 and 6
44	A cube of side length 8 cm is glued on top of another cube of side length 10 cm. The solid shape is then painted grey, including the bottom face. Calculate the surface area that is painted grey?			
	A) 856 cm^2	B) 920 cm^2	C) 984 cm^2	D) 324 cm^2
45	A shop is offering a 15% discount on normal prices. The normal price for a shirt is €32.00 and the normal price for a tie is €14.00. Norman bought a shirt and two ties from this shop. How much did Norman spend?			
	A) €69.00	B) €51.00	C) €61.00	D) €30.00

Section B

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

21	Find the value of: $35 + (4 - 7) - (16 - 8)$
	A) 30 B) 24 C) 8 D) 38
22	John entered the post office at 9:35 am and left at 10:20 am. How long was John at the post office?
	A) 15 min B) 55 min C) 45 min D) 1 h 15 min
23	Café Bom costs €8.20 per 250 g. Calculate the cost of 750 g of Café Bom.
	A) €24.60 B) €12.30 C) €20.50 D) €15.70
24	Which two of the following fractions are equivalent to each other?
	$\frac{4}{9}$ $\frac{3}{4}$ $\frac{12}{27}$ $\frac{9}{16}$ $\frac{12}{18}$
	A) $\frac{4}{9}$ and $\frac{9}{16}$ B) $\frac{3}{4}$ and $\frac{9}{16}$ C) $\frac{9}{16}$ and $\frac{12}{18}$ D) $\frac{4}{9}$ and $\frac{12}{27}$
25	These are the number of ice-creams sold by a vendor on each day from Monday to Friday.
	30 35 45 55 65
	Find the mean number of ice-creams sold per day.
	A) 50 B) 45 C) 46 D) 35
26	Express 525 as a product of prime factors.
	A) $3^2 \times 5 \times 7$ B) $3 \times 5^2 \times 7$ C) $2 \times 3 \times 5^2$ D) $3 \times 5 \times 11$
27	If $P = b(a - 6c)$, find the value of P when $a = 20$, $b = 5$ and $c = 3$.
	A) 210 B) 82 C) 10 D) 55

28 A map uses a scale of 1 cm to 50 m.
The actual distance between points B and C is 345 m.
What length is this distance on the map?

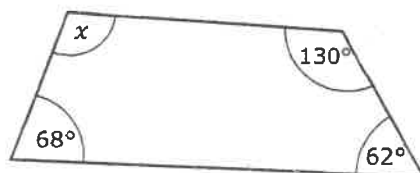
- A) 69 cm B) 6.9 cm C) 3.45 cm D) 5 cm

29 Fill in the missing terms of the following sequence:

12.45, 12.60, 12.75, _____, 13.05, _____

- A) 12.95 ... 13.20 B) 12.90 ... 13.25 C) 12.95 ...13.25 D) 12.90 ...13.20

30 Find the value of the angle marked x .



- A) 118° B) 260° C) 110° D) 100°

31 Work out: $\frac{23}{28} - \frac{5}{7}$

- A) $\frac{3}{28}$ B) $\frac{18}{28}$ C) $\frac{18}{21}$ D) $\frac{9}{14}$

32 A smart watch costs 187 GBP (Great Britain Pound). Taking €1 = 0.85 GBP, calculate the cost of the smart watch in euro.

- A) € 272 B) €220 C) €158.95 D) €215.05

33 Which of the following numbers is closest to 5?

- A) 5.008 B) 4.95 C) 5.10 D) 5.01

34 Express 800 g as a percentage of 4 kg.

- A) 50% B) 20% C) 200% D) 2%

35 A bag contains a set of cards with a number on each of them.

The probability that I pick a card showing a multiple of 3 is $\frac{5}{18}$.

What is the probability that the card I pick does **not** show a multiple of 3?

- A) $\frac{3}{18}$ B) 13 C) $\frac{13}{18}$ D) $\frac{3}{5}$

36 A farmer picked 240 kg of grapes.

5% of the grapes picked were not good for wine making.

Work out the weight of grapes that may be used for wine making.

- A) 228 kg B) 12 kg C) 245 kg D) 252 kg

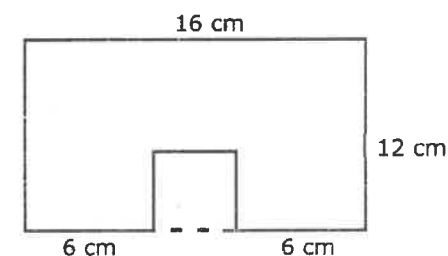
37 A painter charges x euro for any material used and y euro for every hour he spends on the job. It takes him 15 hours to finish a job.

The formula for the total charge C in euro for the job is:

- A) $C = x + y + 15$ B) $C = 15(x + y)$ C) $C = 15x + y$ D) $C = x + 15y$

38 The diagram below shows the remaining part when a square is cut from a rectangular board.

Work out the area of the remaining part.



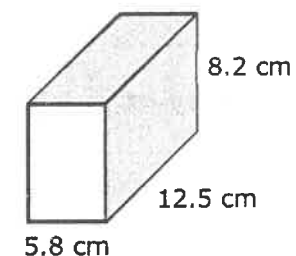
- A) 168 cm^2 B) 176 cm^2 C) 156 cm^2 D) 192 cm^2

39 Which one of the following statements is correct?

A parallelogram has:

- A) two pairs of equal sides and only one pair of parallel sides
B) only one pair of equal sides and two pairs of parallel sides
C) only one pair of equal sides and only one pair of parallel sides
D) two pairs of equal sides and two pairs of parallel sides

40 Calculate the total area of the two shaded faces of this cuboid.



- A) 222.56 cm^2 B) 350 cm^2 C) 175 cm^2 D) 26.5 cm^2

20 x 2 marks = **40 marks**