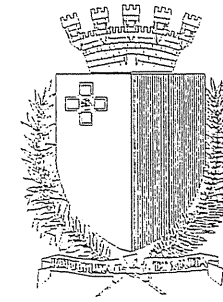


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**EXAMINATION FOR THE ENLISTMENT  
OF SOLDIERS IN THE ARMED FORCES OF  
MALTA**

EXAMINATIONS  
08 AUG 2019  
DEPARTMENT

**MATHEMATICS**

**TIME: 1 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 checked="" type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D
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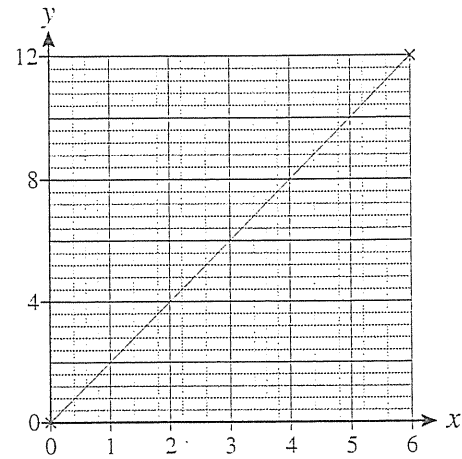
- Each question carries two (2) marks.
- Diagrams are NOT drawn to scale.
- The use of calculators is allowed.

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47 The value of  $x$  in  $3x - 8 = 2x + 7$  is:

- A) 0      B) 5      C) 3      D) 15

48 What is the value of  $y$  when  $x = 5$ ?



- A) 2.5      B) 10      C) 9      D) 11

49 A prime number has only two factors, 1 and itself. Which of the following is a prime number?

- A) 9      B) 71      C) 15      D) 91

50 A square of side 24 cm is cut exactly into 12 identical rectangles. The length of each of these rectangles is 8 cm. The breadth of each rectangle is:

- A) 6 cm      B) 4 cm      C) 10 cm      D) 9 cm

10 x 2 marks = **20 marks**

**TOTAL: 100 MARKS**

**Section A**

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

1 The sum of 609 and 287 is:

- A) 886      B) 896      C) 996      D) 806

2 Change 5.25 metres into centimetres.

- A) 5.025 cm      B) 0.525 cm      C) 52.5 cm      D) 525 cm

3 Simplify the ratio 28 : 72

- A) 7 : 18      B) 14 : 31      C) 14 : 34      D) 7 : 23

4 Change 2.25 hours into minutes

- A) 150 minutes      B) 105 minutes      C) 135 minutes      D) 125 minutes

5 Work out:  $\frac{1}{6}$  of €108

- A) €18      B) €14      C) €10.80      D) €1.08

6 A case of six 1.5 litre bottled water costs €4.02. The cost of one bottle is

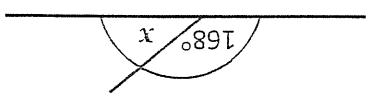
- A) 40.5c  
B) 67c  
C) 268c  
D) 62c

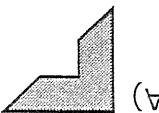
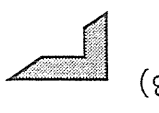
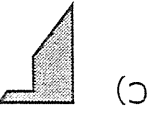
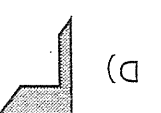
7 The set of numbers all made up of multiples of 3 is:

- A) 18, 15, 45, 48  
B) 24, 32, 45, 60  
C) 21, 27, 33, 35  
D) 18, 27, 28, 32

8 Fill in the missing terms in the sequence 1.25, 1.5, 1.75, \_\_\_\_, 2.25, \_\_

- A) 2.0, ..., 2.25      B) 2.25, ..., 2.5      C) 2.0, ..., 2.75      D) 2.0, ..., 2.5

9	A ferry leaves Port at 06:30 and arrives at its destination at 08:15. How long is the trip? A) 2 hr 30 min B) 1 hr 45 min C) 2 hr 45 min D) 1 hr 30 min
10	Work out $12.5 + 8.5 \times 2$ A) 42 B) 21 C) 29.5 D) 28.5
11	Simplify $5x + 1 - x - 3$ A) $4x - 4$ B) $4x - 2$ C) $4x + 2$ D) $6x - 2$
12	Calculate angle $x$ .  A) $192^\circ$ B) $22^\circ$ C) $182^\circ$ D) $12^\circ$
13	Calculate the mean of the following set of numbers. 25, 20, 25, 24, 25, 19, 23 A) 25 B) 23 C) 6 D) 24.5
14	Work out $\frac{5}{8} - \frac{2}{8}$ A) $\frac{3}{8}$ B) $\frac{7}{8}$ C) $\frac{16}{3}$ D) 3
15	0.125 is the same as A) $\frac{125}{100}$ B) $\frac{8}{3}$ C) $\frac{1}{8}$ D) $\frac{125}{100}$

41	What is the fourth term of the following sequence? 28, 30, 34, <u>?</u> , 48, 58 A) 42 B) 36 C) 40 D) 38
42	A bag contains only green balls and yellow balls. One ball is picked at random. The probability that the ball is green is $\frac{1}{4}$ . The probability that the ball is yellow is: A) $\frac{2}{1}$ B) $\frac{3}{2}$ C) $\frac{1}{4}$ D) $\frac{3}{4}$
43	A car is moving at a speed of 140 km/hr. Given that 8 km = 5 miles, what is the speed of the car in miles per hour? A) 87.5 mph B) 224 mph C) 110 mph D) 270 mph
44	Simplify the ratio: 150 mm : 0.4 m : 2 m A) 15:4:1 B) 8:3:2 C) 3:8:40 D) 75:2:1
45	The mean age of ten men is 23 years. Two men aged 21 years and 28 years join the ten men. The mean age of the twelve men: A) remains the same B) decreases C) increases D) cannot be found
46	Which of these shapes has reflective symmetry? A)  B)  C)  D) 

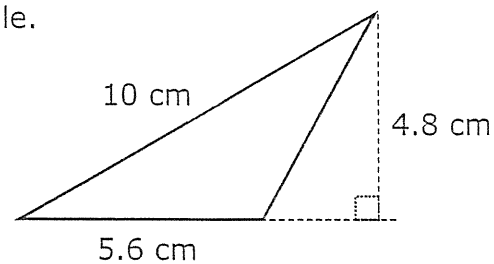
**Section C**

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

35 One hundred and twenty five people applied for a job. Fifteen applicants were selected. What percentage of the applicants were selected?

- A)  $833\frac{1}{3}\%$       B) 12%      C) 18.75%      D) 6.25%

36 Calculate the area of the given triangle.



- A) 13.44 cm<sup>2</sup>      B) 28 cm<sup>2</sup>      C) 96 cm<sup>2</sup>      D) 20.4 cm<sup>2</sup>

37 The time,  $T$ , to cook a turkey depends on the weight,  $w$ , in kilograms. Cooking takes 40 minutes per kilogram and an additional 30 minutes for browning.

The formula for the time,  $T$ , in minutes, is given by:

- A)  $T = 40w - 30$   
B)  $T = 30w + 40$   
C)  $T = 30 \times 40w$   
D)  $T = 40w + 30$

38 Chocolate sauce is made by mixing chocolate and cream in the ratio 2 : 3. How much cream is needed to make 370 ml of chocolate sauce?

- A) 222 ml      B) 185 ml      C) 148 ml      D) 74 ml

39 Which one of the following statements is correct?

An isosceles triangle has:

- A) two equal sides and three equal angles  
B) three equal sides and three equal angles  
C) two equal sides and two equal angles  
D) no sides equal and no angles equal

40 A string is 5 m long. How many pieces of string 28 cm long can be cut from this string?

- A) 18      B) 6      C) 5      D) 17

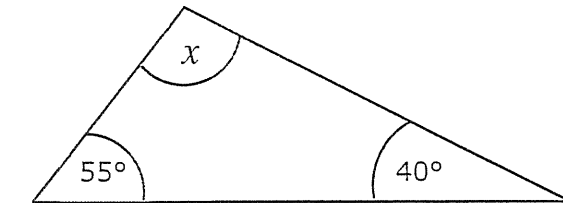
20 x 2 marks = **40 marks**

16 The set made up of all the factors of 12 is

- A) 1, 2, 6, 12, 14, 36  
B) 1, 4, 12, 3, 24, 48  
C) 2, 3, 6, 24, 16, 12  
D) 1, 2, 3, 4, 6, 12

17 Work out angle  $x$ .

- A) 95°  
B) 265°  
C) 85°  
D) 275°



18 Increase €300 by 50%.

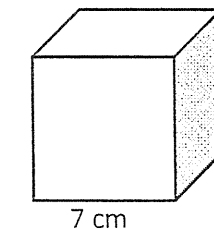
- A) €350      B) €450      C) €250      D) €150

19 Solve  $19 = 5 + 7x$

- A) 2      B) 12      C) 7      D) 17

20 Calculate the total surface area of the cube.

- A) 168 cm<sup>2</sup>  
B) 49 cm<sup>2</sup>  
C) 294 cm<sup>2</sup>  
D) 147 cm<sup>2</sup>



7 cm

20 x 2 marks = **40 marks**

**Section B**

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

21	Work out the value of: $3.25 \times 5 + 1.25 \times 5$	A) 101.56 B) 87.5 C) 22.5 D) 97.5
22	Use your calculator to work out the value of: $\frac{67.27}{(3.1)^2 \times 4.2}$	A) 0.6 B) 0.205 C) 0.012 D) 2.52
23	Find the median of: 33, 34, 35, 37, 38, 39, 39	A) 39 B) 37 C) 36.5 D) 36
24	Which one of the following statements is correct?	A) $7.3 < 7.259$ B) $6.123 > 6.132$ C) $7.99 < 7.891$ D) $8.9199 < 8.92$
25	Keith spends $\frac{1}{2}$ of his earnings on a car loan and $\frac{3}{5}$ of his earnings on a house loan. What fraction of his earnings does Keith spend on his loans?	A) $\frac{5}{24}$ B) $\frac{19}{24}$ C) $\frac{11}{24}$ D) $\frac{11}{3}$
26	Fill in the missing terms of the sequence: 11, 13, 17, 23, —, —	A) 27, 33 B) 31, 41 C) 29, 33 D) 25, 29

27	Martha decorates 15 cupcakes in 45 minutes. How many cupcakes can she decorate in 60 minutes?	A) 20 B) 90 C) 25 D) 60
28	Find the size of angle $x$ .	A) $80^\circ$ B) $40^\circ$ C) $73^\circ$ D) $53^\circ$
29	Phillip missed 22 minutes of a film as he arrived late at the cinema. The film lasted for 2 hours and 15 minutes. How much of the film did Phillip see?	A) 1 hr 7 min B) 1 hr 37 min C) 1 hr 38 min D) 1 hr 53 min
30	Change 0.526 to a fraction. Give your answer in its simplest form.	A) $\frac{213}{500}$ B) $\frac{131}{250}$ C) $\frac{500}{263}$ D) $\frac{139}{250}$
31	Increase €1700 by 5%.	A) €2550 B) €1705 C) €1615 D) €1785
32	The scale of a map is given by 4 cm is to 1 km. Which one of the following ratios is equivalent to the given map ratio?	A) 1 cm : 250 m B) 2 cm : 340 m C) 3 cm : 560 m D) 4 cm : 120 m
33	The probability that it will rain on Tuesday is $\frac{3}{8}$ . What is the probability that it will <b>not</b> rain on Tuesday?	A) $\frac{8}{3}$ B) 5 C) $\frac{8}{5}$ D) $\frac{4}{3}$
34	On Monday morning, the temperature was $6^\circ\text{C}$ . In the evening the temperature was $-4^\circ\text{C}$ . By how many $^\circ\text{C}$ did the temperature fall?	A) 2 B) 10 C) -2 D) 11