

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

2022

Subject: Mathematics

Date: 2022

Time: 15.30 – 16.30 (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.

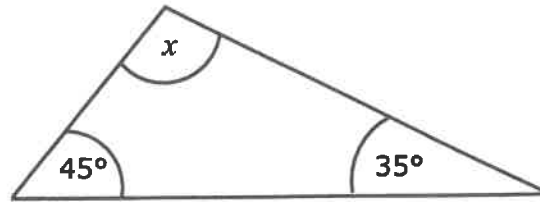
e.g. If answer C is selected, fill in the appropriate circle as shown below.

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.

17 Work out angle x .

- A) 90°
- B) 280°
- C) 80°
- D) 100°



18 Work out 30% of 8.5 kg

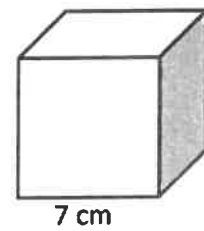
- A) 2.83 kg
- B) 2.55 kg
- C) 25.5 kg
- D) 5.5 kg

19 Solve the equation: $6x - 19 = 5$

- A) 4
- B) 2.33
- C) -4
- D) 6

20 Calculate the volume of the cube.

- A) 294 cm^3
- B) 49 cm^3
- C) 343 cm^3
- D) 126 cm^3



20 x 2 marks = **40 marks**

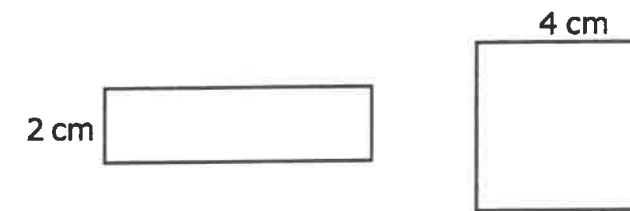
45 A candle is 20 cm long. The candle is lit and after some time its length decreased by 1 cm. How much is this decrease as a percentage?

- A) 10%
- B) 1%
- C) 5%
- D) 20%

46 A bag of dog food contains exactly enough food to feed 4 dogs for 6 days. How long will the bag last for 3 dogs?

- A) 4 days
- B) 5 days
- C) 8 days
- D) 7 days

47 A rectangle of side 2 cm and the square of side 4 cm have the same area. Calculate the perimeter of the rectangle.



- A) 36 cm
- B) 20 cm
- C) 16 cm
- D) 10 cm

48 Solve the equation: $5x - 12 = 3(x + 2)$

- A) $x = 7$
- B) $x = 9$
- C) $x = \frac{9}{4}$
- D) $x = 1$

49 The LCM (Least Common Multiple) of two numbers is 12. One of the numbers is 3. What is the second number?

- A) 5
- B) 2
- C) 6
- D) 4

50 Two fair dice are tossed. What is the probability that you get 6 on both dice?

- A) $\frac{1}{12}$
- B) $\frac{1}{36}$
- C) $\frac{1}{2}$
- D) $\frac{1}{6}$

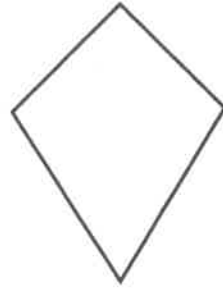
10 x 2 marks = **20 marks**

TOTAL: 100 MARKS

Section C

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

41 The equal angles of a kite are each 110° . The sizes of the other two angles are in the ratio 2:3. Calculate the size of the smallest angle of the kite.



- A) 56° B) 90° C) 84° D) 100°

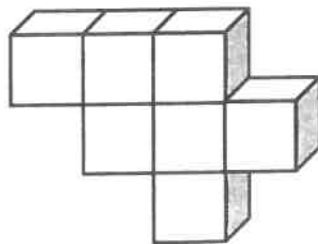
42 Ralf put an equal number of 2c and 5c coins in his pocket. In all he had 21c. How many coins did Ralf put in his pocket?

- A) 4 B) 6 C) 5 D) 7

43 The mean of thirty six numbers is 2.5. What is the total of all these numbers?

- A) 25 B) 90 C) 338.8 D) 33.5

44 This solid shape is made up of seven identical cubes. The shaded area is 12 cm^2 . Calculate the total volume of the solid shape.



- A) 7 cm^3 B) 28 cm^3 C) 14 cm^3 D) 56 cm^3

Section B

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

21 Calculate the value of:
 $2 + 5 \times 10 - 6$

- A) 46 B) 64 C) 28 D) 22

22 Use your calculator to work out the value of:
 $\frac{6.2 \times (7.8 - 3.3)}{9}$

- A) 0.5 B) 6.2 C) 3.1 D) 1.2

23 2 kg of biscuits cost €5.40. Find the cost of 5 kg of biscuits.

- A) €13.50 B) €10.80 C) €27 D) €2.16

24 Which one of the following statements is correct?
An equilateral triangle has:

- A) three acute unequal angles
B) three obtuse equal angles
C) one obtuse angle and two acute equal angles
D) three acute equal angles

25 What is the mode of the following set of numbers:
14, 18, 16, 14, 17, 13, 12, 16

- A) 15 B) 14 C) 15.5 D) 14 and 16

26 The ratio of 750 m to 3 km is given by:

- A) 3 : 7 B) 1 : 4 C) 3 : 5 D) 2 : 7

27 Work out $\frac{11}{7} - \frac{3}{4}$.

- A) $\frac{8}{3}$ B) $\frac{6}{7}$ C) $\frac{23}{28}$ D) $\frac{8}{28}$

28 Decrease €2400 by 15%.

- A) €2280 B) €2040 C) €2385 D) €2760

29 In a game, Jerry picked the two cards shown below.

What is the total score he obtained?



- A) -8 B) -15 C) -2 D) 8

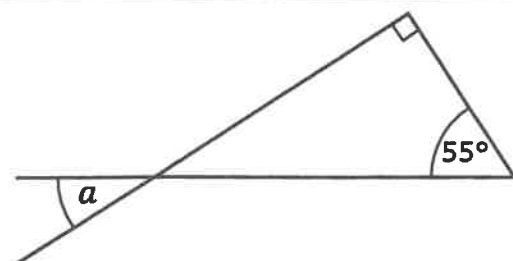
30 Annie watched a film that was 75 minutes long. The film ended at 11.05 p.m. At what time did the film start?

- A) 9.50 p.m. B) 00.50 a.m. C) 10.30 p.m. D) 9.25 p.m.

31 The probability that Janice is selected to represent her company abroad is $\frac{2}{3}$. What is the probability that she is **not** selected?

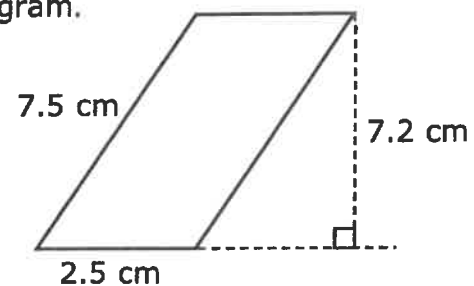
- A) $\frac{2}{3}$ B) $\frac{3}{2}$ C) 0 D) $\frac{1}{3}$

32 Work out the value of angle a .



- A) 35° B) 55° C) 145° D) 125°

33 Calculate the area of the given parallelogram.



- A) 27 cm^2 B) 18.75 cm^2 C) 18 cm^2 D) 20 cm^2

34 Fill in the missing terms of the sequence:

13, 16, 19, 22, _____, _____

- A) 25, 28 B) 26, 29 C) 23, 26 D) 25, 29

35 Given that $2x - 1 = 17$, find the value of $(6x + 1)$.

- A) 51 B) 49 C) 58 D) 55

36 Arrange these numbers in order, smallest first.

$\frac{1}{3}$, 0.3, 33%, $\frac{3}{11}$

- A) $\frac{3}{11}$, $\frac{1}{3}$, 33%, 0.3
 B) $\frac{1}{3}$, 0.3, 33%, $\frac{3}{11}$
 C) $\frac{3}{11}$, 0.3, 33%, $\frac{1}{3}$
 D) $\frac{3}{11}$, 0.3, $\frac{1}{3}$, 33%

37 A boy has x euro and spends y cents. The amount of money, in cents, left is:

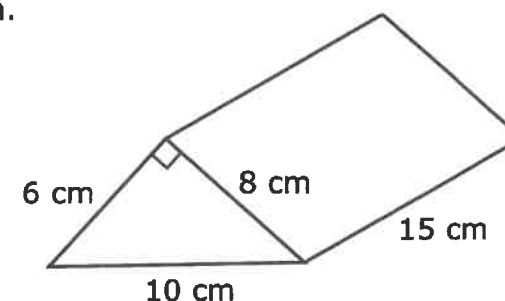
- A) $100(x - y)$
 B) $x - y$
 C) $100x - y$
 D) $x - \frac{y}{100}$

38 Two common factors of 420 and 364 are:

- A) 3 and 7 B) 4 and 7 C) 2 and 15 D) 4 and 13

39 Calculate the volume of the prism.

- A) 600 cm^3
 B) 180 cm^3
 C) 360 cm^3
 D) 450 cm^3



40 500 workers voted in a workers' council election. Petra obtained 43% of the votes and Hannah obtained 27% of the votes. 5% of the workers did not vote. If the rest of the workers voted for Kim, how many votes did Kim get?

- A) 25 B) 125 C) 375 D) 75

20 x 2 marks = 40 marks