

**Junior Lyceum Entrance Examination  
into Form One**

**2010**

**MATHEMATICS**

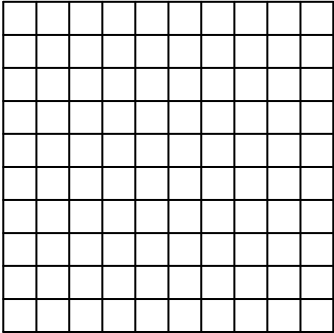
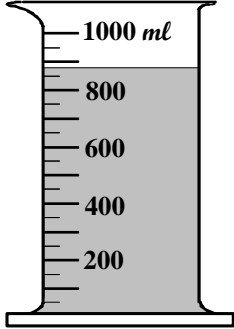

DO NOT WRITE IN THIS SPACE

ANSWER ALL QUESTIONS

Questions 1 to 10 ... 1 mark each.

Questions 11 to 19 ... 4 marks each.

Questions 20 to 28 ... 6 marks each.

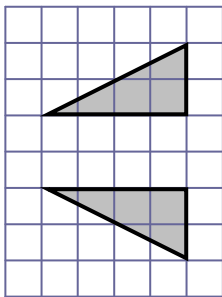
1. €7000 – €3999 =  € _____	2. Fill in using <b>only odd numbers</b> .  <input type="text"/> + <input type="text"/> + <input type="text"/> = 17
3. Shade 25%. 	4. Write the amount of water correct to the nearest 100 ml.  _____ ml
5. 1 km 30 m = _____ m	6. $\frac{3}{5}$ of 400 grams = _____ grams
7. Double 79 = _____	8. 159 ÷ <input type="text"/> = 1.59
9. <b>Mark</b> , with an arrow, <b>215</b> on this number line. 	10. Tick <input checked="" type="checkbox"/> the fraction that is <b>less than</b> 0.75. $\frac{4}{5}$ <input type="checkbox"/> $\frac{3}{4}$ <input type="checkbox"/> $\frac{1}{2}$ <input type="checkbox"/> $\frac{7}{8}$ <input type="checkbox"/>

11. In jug **A** there are  $1.23 \text{ l}$  of water.  
 In jug **B** there are  $250 \text{ ml}$  less water.  
 Work out the amount of water in jug **B**.  
 Give your answer in *ml*.

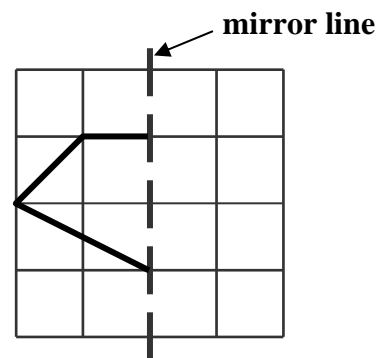


\_\_\_\_\_ *ml*

12. a) These triangles are the reflection of each other.  
**Draw the mirror line.**

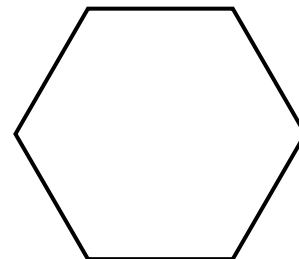


- b) **Complete** the shape to make it symmetrical.



- c) This is a **regular hexagon**.  
 How many lines of symmetry does it have?

\_\_\_\_\_ lines of symmetry



13. **Underline** the correct estimation.

- a) The length of a car is about:

40 cm      400 mm      4 m      0.4 m

- b) The weight of a man is about:

80 kg      8 kg      800 kg      0.8 kg

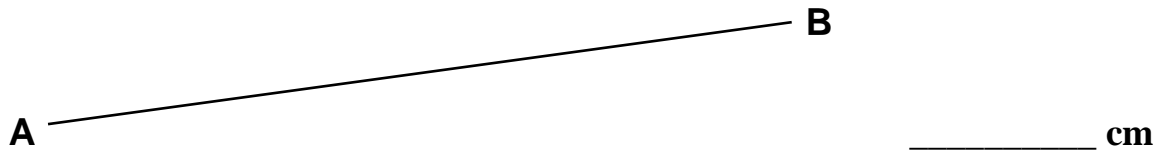
- c) A roof top water tank has a capacity of:

5 Litres      500 Litres      50 Litres      0.5 Litre

- d) A bus trip from Mosta to Valletta usually takes about:

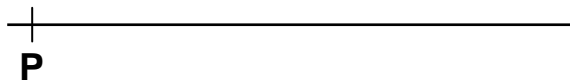
3 minutes      3 hours      30 minutes      300 seconds

14. a) i. Use a ruler to **measure** the line **AB**.



ii. Use a pencil and a ruler to **draw** a line 12.5 cm long.

b) Use a protractor to **draw and mark** an angle of  $155^\circ$  at **P**.



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15. I am one of these cards.



- a) I am **larger than 50**.
- b) I am an **odd** number.
- c) I am a **multiple** of 9.
- d) I am a **square** number.

What number am I?



18. There are 17 children in a class.  
The teacher shares 275 blocks equally among the children.

a) Work out the number of blocks each child gets.

\_\_\_\_\_ blocks

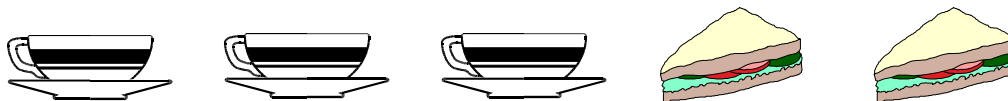
b) How many **more blocks** does the teacher need in order to give each child one more block?

\_\_\_\_\_ blocks

19. A cup of coffee and a sandwich cost €2.45.



3 cups of coffee and 2 sandwiches cost €5.80.



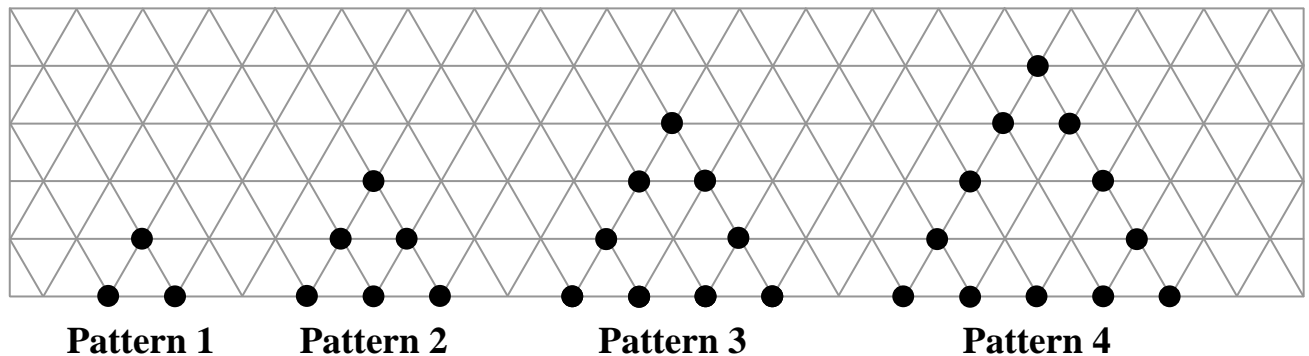
Work out **the cost of a cup of coffee**.

\_\_\_\_\_

20. a) Write down the **missing numbers**.

0.2, 0.35, 0.5, \_\_\_\_\_, 0.8, \_\_\_\_\_.

b) Look at these dot patterns.



Fill in.

i. Seen from left to right, every pattern is

\_\_\_\_\_ (increasing, decreasing) by \_\_\_\_\_ dots.

ii. **Pattern 15** will have \_\_\_\_\_ dots.

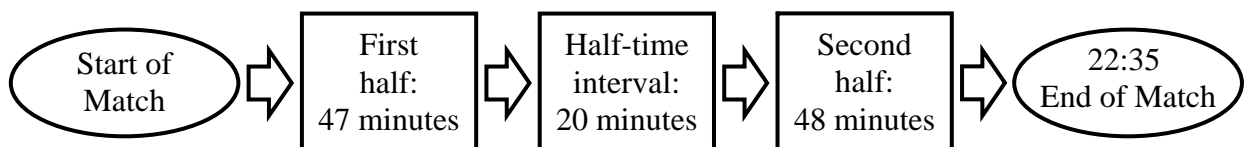
iii. **Pattern** \_\_\_\_\_ will have **60 dots**.

21. a) Fill in.

i.  $\frac{1}{2}$  hour = \_\_\_\_\_ minutes      ii. 3 weeks = \_\_\_\_\_ days

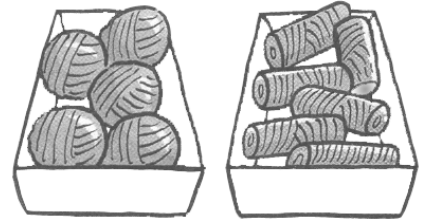
b) Marianne and Michael went to watch a football match.

Use the diagram to work out the time when the match started.



22. a) i. Each ball of string in Tray A is 5.4 m long.

Work out the **total length** of string in Tray A.



Tray A

Tray B

\_\_\_\_\_ m

ii. Each ball of string in Tray B is 4.2 m long.

Work out the **total length** of string in Tray B.

\_\_\_\_\_ m

b) Fill in.

In Tray A there are \_\_\_\_\_ m of string \_\_\_\_\_ (**more, less**) than in Tray B.

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23. a) Write down **two** fractions **greater than**  $\frac{2}{7}$  but **less than**  $\frac{3}{7}$ .

\_\_\_\_\_

b) Maria receives €14 per week as pocket money.

She saves **one fourth** of it every week to buy a hat costing €21.

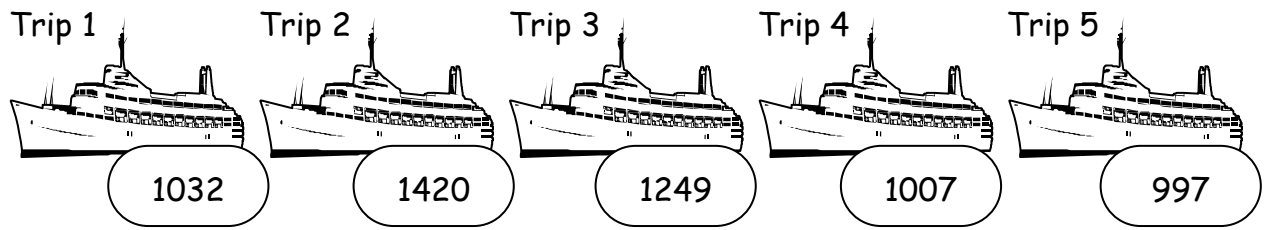
i. How much money does Maria save in one week?

€ \_\_\_\_\_

ii. After how many weeks will Maria have enough money to buy the hat?

\_\_\_\_\_ weeks

24. The diagram shows the **number of passengers** that crossed from Malta to Gozo on five different night trips.



a) Work out the **mean (average)** number of passengers on each trip.

\_\_\_\_\_ passengers

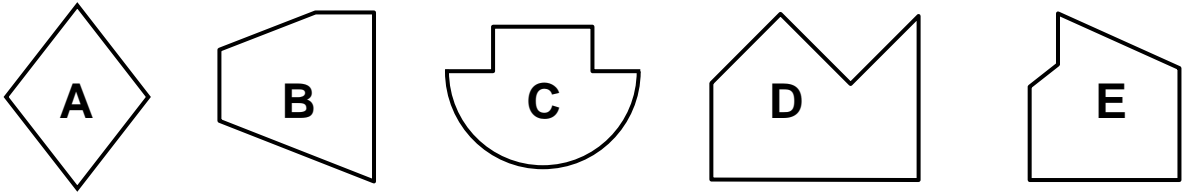
b) 75% of the passengers on **Trip 1** were women.

There were 746 women on **Trip 2**.

How many **more women** were there on **Trip 1** than on **Trip 2**?

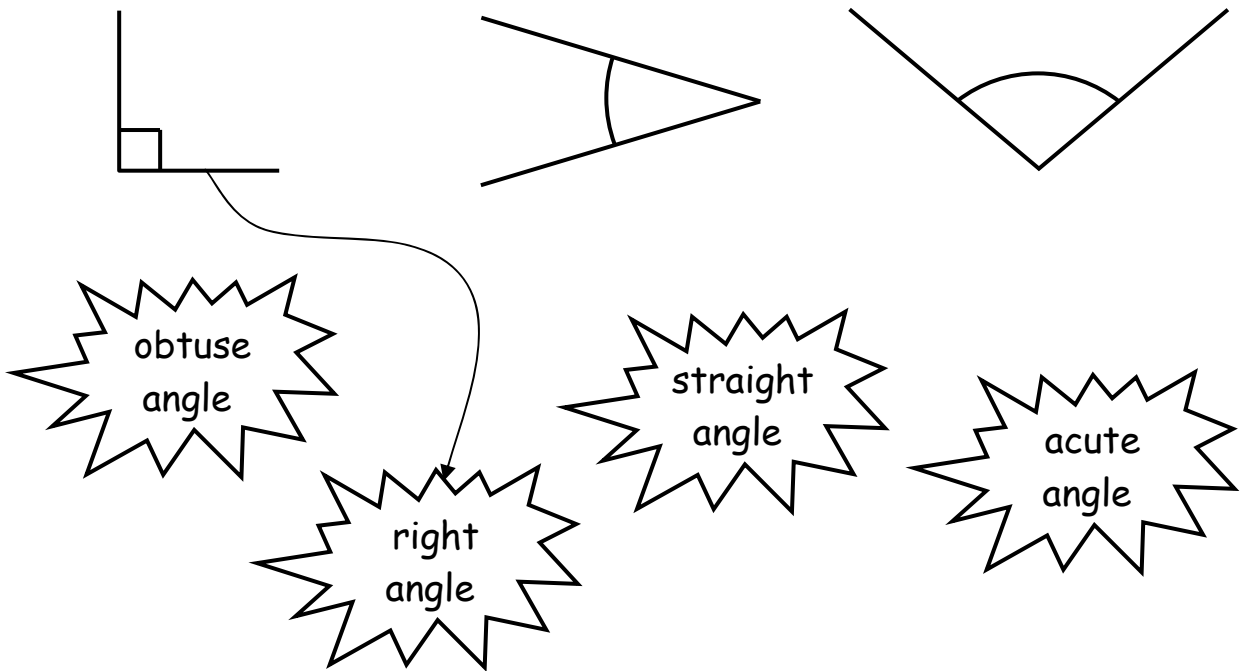
\_\_\_\_\_ women

25. a) Look at these shapes.

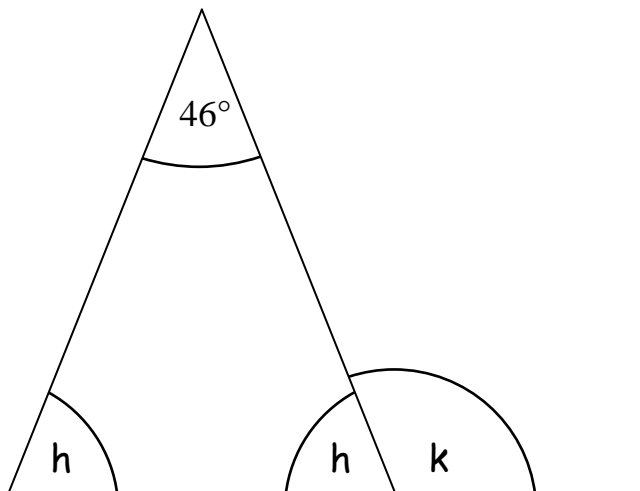


Which shape has 3 **horizontal** lines? \_\_\_\_\_

b) Match each angle to its proper name as in the example.



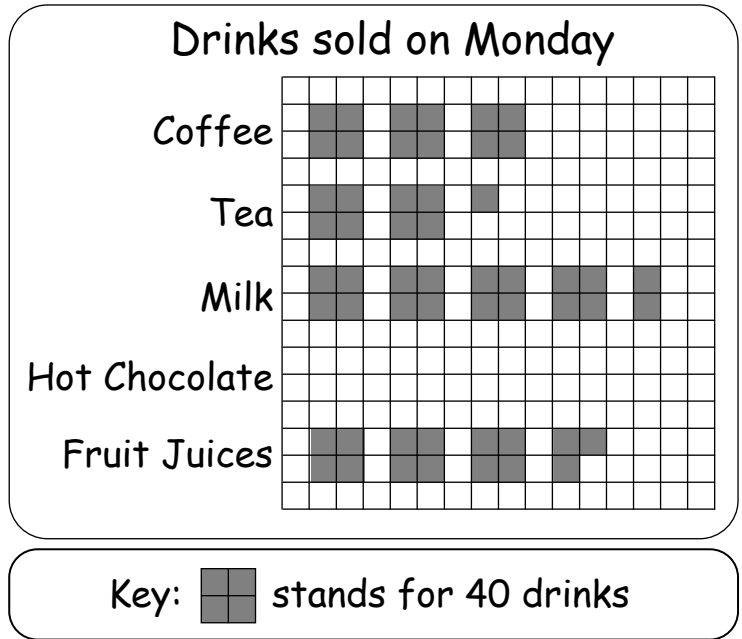
c) The triangle in the diagram is **isosceles**.  
 Work out the size of the angles marked **h** and **k**.  
**Do not use a protractor.**



h = \_\_\_\_\_  
 k = \_\_\_\_\_

26. The table and the pictograph show the number of drinks a coffee shop sold on Monday.

Drink	Drinks sold
Coffee	120
Tea	
Milk	180
Hot Chocolate	
Fruit Juices	150
Total	600



- Complete the **table**.
- Complete the **pictograph**.
- What **proportion** of the **total** number of drinks sold were **Fruit Juices**?  
Give your answer in its **lowest terms**.

27. Write down the **missing digits**.

a)  $5.3 \times \square = 10.6$

b)  $12\square + 6 = 130$

c)  $5 \times \square 7 = 18\square$

d)  $60\square \div 4 = \square 52$

28.

## Explore

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A salesgirl sold 1100 jeans in **four months**.

Each month she sold 50 jeans **more than the month before**.

Work out how many jeans she sold during the **first month**.

\_\_\_\_\_ jeans

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**END OF PAPER**

**Junior Lyceum Entrance Examination into Form I - 2010**  
**Mathematics Marking Scheme**

No	Requirements	Mark	Additional Guidance
1	3001	1	
3	25 squares shaded	1	
5	1030	1	
7	158	1	
9	c.a.o.	1	any clear indication

No	Requirements	Mark	Additional Guidance
2	c.a.o.	1	Accept repeated numbers
4	900	1	
6	240	1	
8	100	1	
10	$\frac{1}{2}$	1	Only correct box ticked

Question	Requirements	Mark	Additional Guidance
11	Valid attempt to change litres to millilitres. 1230 <i>ml</i> Subtracting 250 <i>ml</i> from the answer 980	1 1 1 1	Accept any other valid method  f.t. for incorrect 1230
12	a) Correct drawing of mirror line b) Correct drawing of reflected image c) Attempt to draw lines of symmetry 6	1 1 1 1	At least 3 lines shown full marks for all 6 lines shown
13	a) 4 m b) 80 kg c) 500 litres d) 30 minutes	1 1 1 1	
14	a) i. 9.9 ( $\pm 2$ mm) ii. Line 12.5 cm long drawn ( $\pm 2$ mm) b) Angle of $155^\circ$ drawn ( $\pm 2^\circ$ ) Angle P marked with an arc if obtuse.	1 1 1 1	Do not award mark if angle is not drawn at P.
15	Award 1 mark for each correct condition satisfied. 81	1, 1, 1 1	
16	a) Swings b) North East or N.E. (c.a.o.) c) 5 m South (o.e.) 45 m East (o.e.)	1 1 1 1	Accept any other valid description of a path.
17	a) Valid attempt to find the area of one square. 16 b) Valid attempt to arrive at a solution 4	1 1 1 1	Accept other valid methods.  Award no marks for $16 \div 4 = 4$ Accept $4 \times 4$ (o.e.)
18	a) Attempt to divide Valid intermediate work 16 (c.a.o.) b) 14 (c.a.o.)	1 1 1 1	Do not accept 16 r 3
19	Multiplying €2.45 by 2 €4.90 seen/implied Subtracting result from €5.80 90c (o.e.)	1 1 1 1	Accept any other valid method. Award 1 mark for $5.80 - 2.45$

Question	Requirements	Mark	Additional Guidance
20	a) 0.65, 0.95 (c.a.o.) b) i. increasing, 3 ii. 45 iii. 20	1, 1 1, 1 1 1	
21	a) i. 30 ii. 21 b) Adding 47 min, 20 min and 48 min together. Converting answer to hours and minutes Subtracting answer from 22:35 20:40	1 1 1 1 1	Accept any other valid methods.  o.e.
22	a) i. Multiplying by 5 seen/implied 27 ii. Multiplying by 6 seen/implied 25.2 b) 1.8, more	1 1 1 1 1, 1	Accept any other valid method  Accept any other valid method  f.t. for incorrect 27 or 25.2
23	a) Any two different correct fractions b) i. Valid attempt to arrive at a solution 3.50 ii. Valid attempt to arrive at a solution 6	1, 1 1 1 1 1	f.t. from wrong answer in b) i as long as rounded up to the nearest integer.
24	a) Adding the number of passengers seen/implied Dividing by 5 seen/implied 1141 (c.a.o.) b) Valid attempt to find 75% of 1032 Subtracting 746 from answer 28 (c.a.o.)	1 1 1 1 1 1	Accept any other valid method
25	a) C b) Correct matching of angles to their proper name c) 180° seen/implied h = 67° k = 113°	1 1, 1 1 1 1	f.t. for incorrect value of h (as long as subtracted from 180°)
26	a) Tea: 90 Hot Chocolate: 60 b) Hot Chocolate is represented by 1½ rectangles c) 150/600 seen/implied ¼	1 1 2 1 1	accept 20 accept ½ of a rectangle accept 190/600 accept 19/60
27	a) 2 b) 4 c) 3, 5 d) 8, 1	1 1 2 2	

Question	Requirements	Mark	Additional Guidance
28	50, 100 and 150 seen/implied Valid attempt to arrive at a solution Dividing by 4 seen/implied 200	1 3 1 1	Award marks depending on working shown  Accept any other valid method

**Legend to Marking Scheme:** **c.a.o.** correct answer only  
**f.t.** follow through