

Junior Lyceum Entrance Examination into Form One

Mathematics Sample Paper
(Revised)

November 2006
(Time: 1 hour 45 minutes)

DO NOT WRITE IN THIS SPACE

ANSWER ALL QUESTIONS

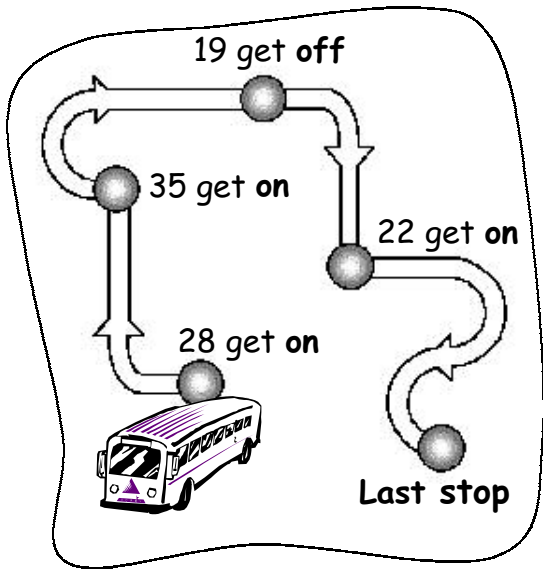
Questions 1 to 10 ... 1 mark each.

Questions 11 to 19 ... 4 marks each.

Questions 20 to 28 ... 6 marks each.

1. The value of 9 in 8195 is: <input type="text"/>	2. $5000 - 2416 =$ <input type="text"/>
3. $560 +$ <input type="text"/> $= 1000$	4. Double 199 = <input type="text"/>
5. Round 2856 to the nearest hundred: <input type="text"/>	6. $65.4 \div 10 =$ <input type="text"/>
7. Half of 670 = <input type="text"/>	8. $\frac{2}{3}$ of 33 = <input type="text"/>
9. Underline the correct answer: A polygon with 5 sides is called a: a) triangle; b) hexagon; c) pentagon; d) quadrilateral.	10. Underline the correct answer: A rough estimate for 799 \times 23 is: a) 14000 b) 16000 c) 21000 d) 24000

11. a) The picture shows a bus route.
Find how many people get off the bus at the **last stop**.



- b) Write a decimal fraction lying **between** 3.7 and 3.8.

- c) Fill in correctly:

$$150 \div 30 = \square$$

12. a) Write in order of size, **smallest** first.

5.07

0.57

5.7

0.75

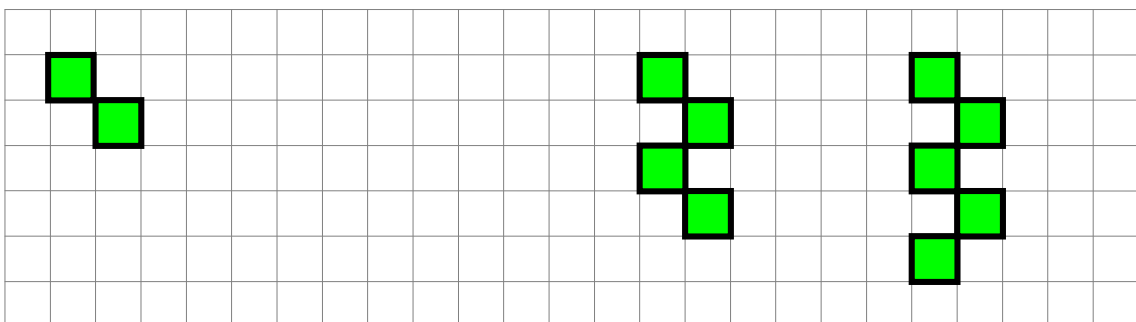
- b) i) Look at these patterns.
Draw pattern 2.

pattern 1

pattern 2

pattern 3

pattern 4



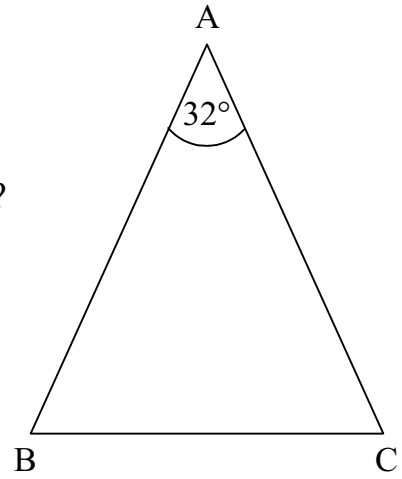
- ii) How many squares do you need to draw **pattern 20**?

_____ squares

13. The diagram shows an **isosceles triangle**.

The diagram is **not** drawn to scale.

Angle A is 32° .



a) How many degrees are angle B and angle C **together**?

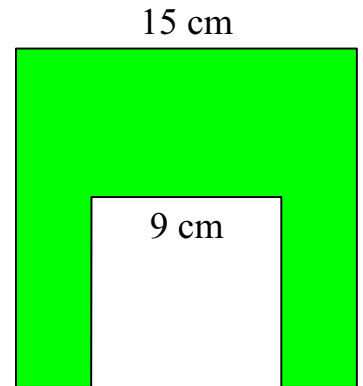
b) **Work out** the size of **angle B**.

14. A **square** of side 9 cm is cut from a larger **square** of side 15 cm.

The remaining part is shaded.

Work out:

i) the perimeter of the shaded part.



_____ **cm**

ii) the area of the shaded part.

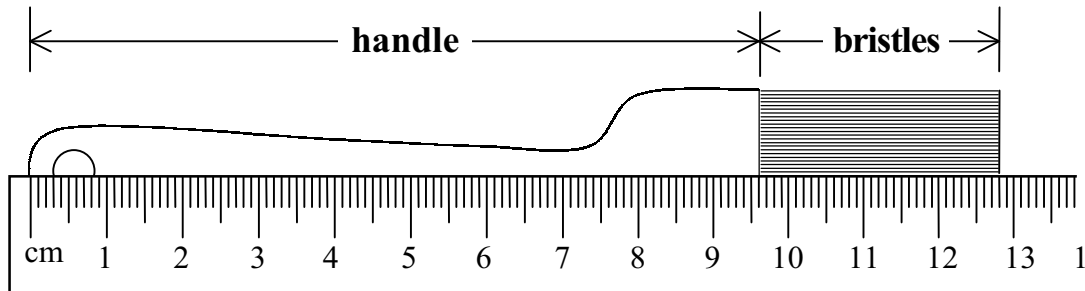
_____ **cm²**

15.



Do not use a ruler to answer this question.

Look at the picture of this paintbrush.



a) Complete:

i) The **total length** of the paintbrush is _____ **cm**.

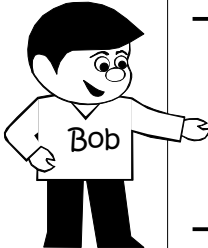
ii) The length of the **handle** is _____ **cm**.

b) Work out the length of the **bristles** in **millimetres**.

_____ **mm**

16. This is the working presented by Bob and Kay. They forgot to make an estimate.

a) Fill in the **estimates** for Bob and Kay.



51×28

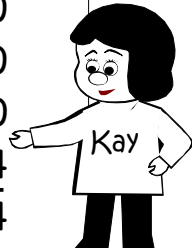
estimate =

51	
$\times 28$	
400	50×8
8	1×8
100	50×20
20	1×20
528	

37×32

estimate =

30	900	60	
7	210	14	

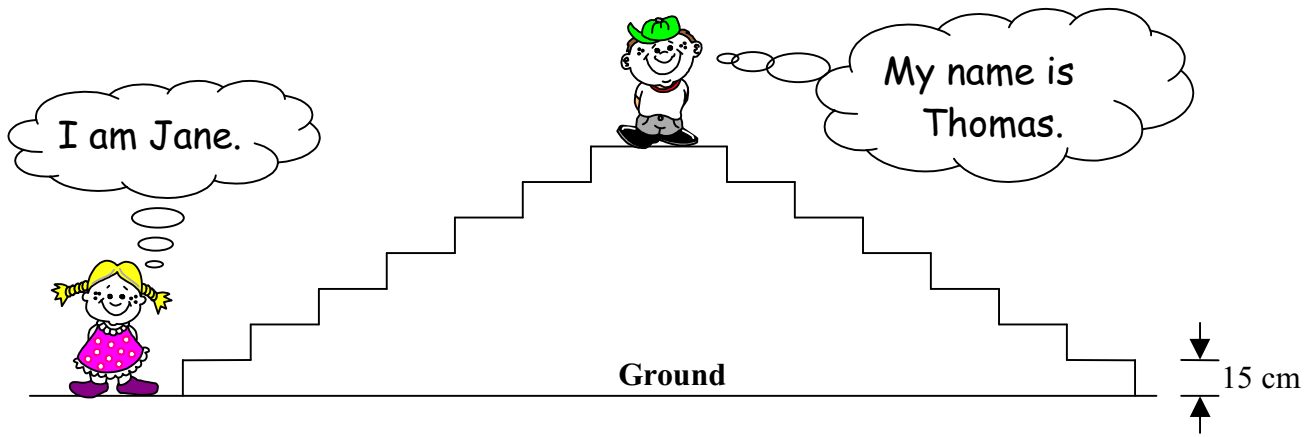


900
210
60
+ 14
1184

b) **Only one of the children got the answer correct.** Fill in:

_____ got the answer correct.

17. Each step in the picture is **15 cm high**.



a) How high is Thomas above the ground? _____ **cm**

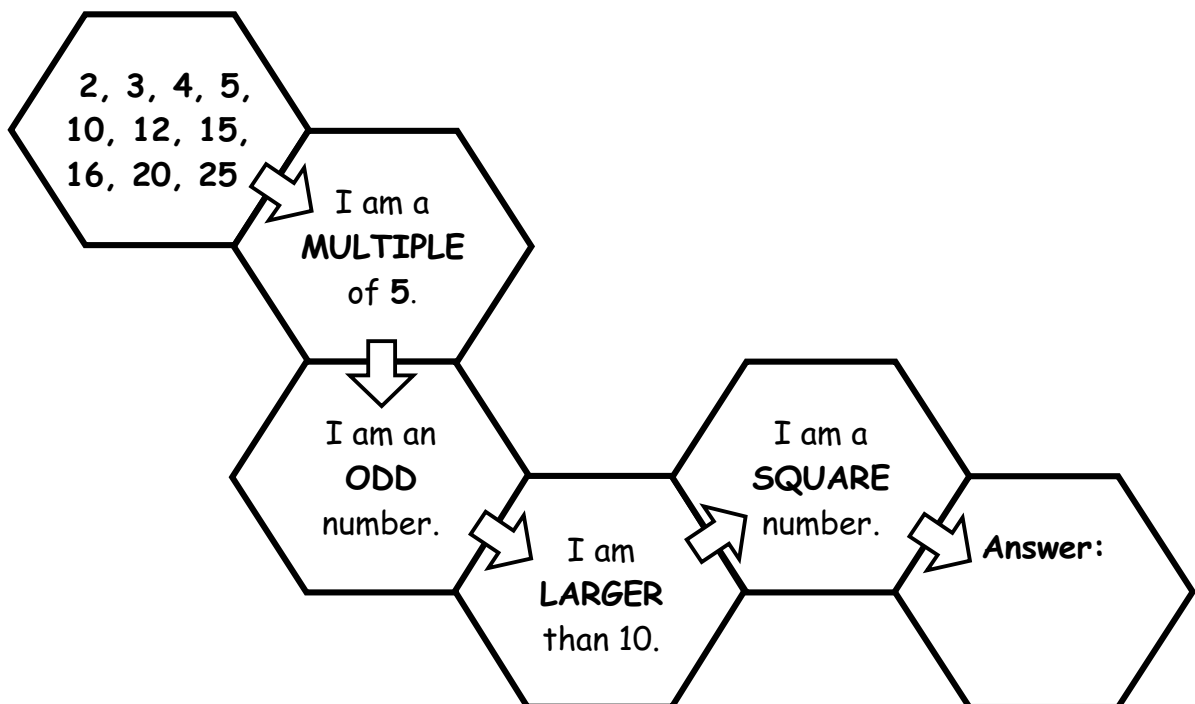
b) Jane goes **up** 3 steps and Thomas goes **down** 5 steps.

i) Who is the higher above the ground? _____

ii) Fill in:

Jane must go **up** _____ **more** steps to be 75 cm above the ground.

18. Use **only the numbers in the first hexagon** and follow the arrows to find the correct answer in the last hexagon.

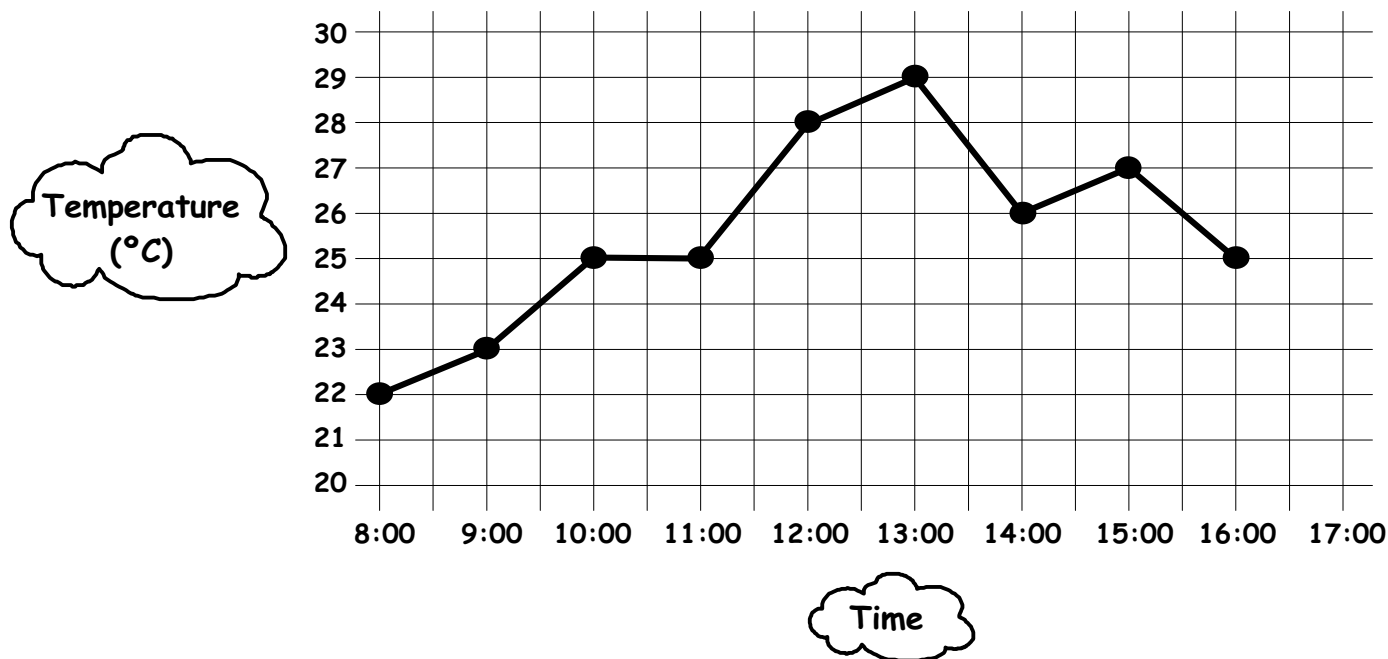


19. Sarah's class is having a party.
 She has **Lm6** to spend on lemonade cans.
Each lemonade can costs **27c**.
 Work out the **greatest number** of lemonade cans she can buy for **Lm6**.



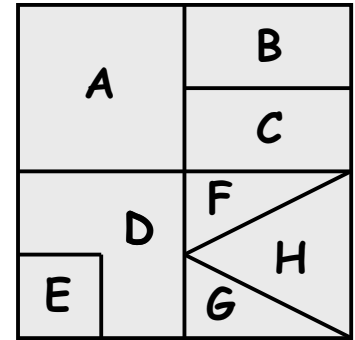
_____ lemonade cans

20. The graph shows the **changing temperature** at home last Sunday.



- a) The temperature at 17:00 was 27 °C.
 Use this temperature to complete the graph.
- b) i) The temperature at **12:00** was _____ °C;
 ii) The temperature at **15:30** was _____ °C.
- c) Write the time when the temperature is at its **warmest**. _____.
- d) What happens to the temperature:
 i) between 11:00 and 12:00? _____.
 ii) between 10:00 and 11:00? _____.

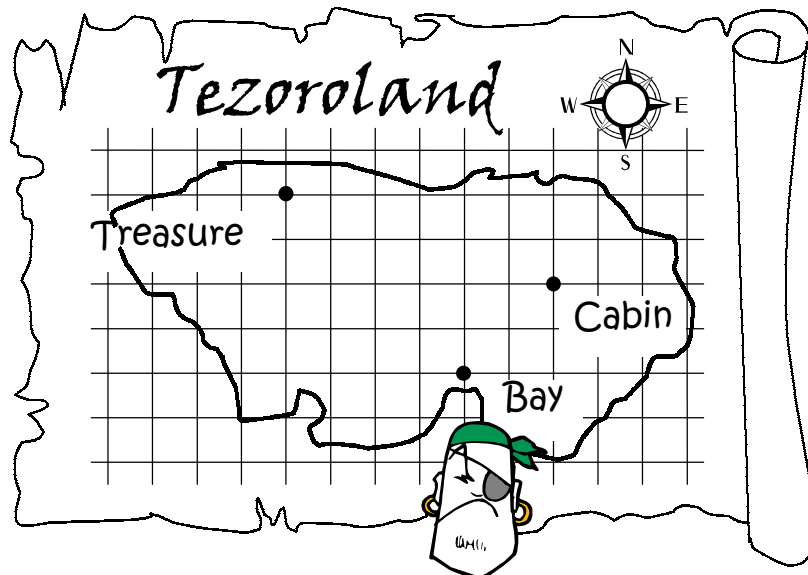
21. The plan shows a square garden divided into eight parts. Each part is marked with a letter. Fill in:



- What fraction of the whole garden is **B**? _____
- Part A** is _____ % of the whole garden?
- Part** _____ = **Part D** + **Part E**.
- What fraction of the whole garden is **Part E**? _____
- Part E** = **Part** _____
- Part H** = **Part** _____

22. Look at this map.

Each side of a square on the map stands for a length of 2.5 km.



Captain Gold is at the **Bay**.

Fill in with the correct **compass directions**:

- Captain Gold walks **directly** _____ to go to the **Cabin**.
 - Captain Gold is now at the Cabin.
He then goes to find the Treasure.
He walks **15 km** _____ and then **5 km** _____.
- Captain Gold is now at the Treasure.
He wants to get back to the Bay.
He can walk **10 km East** and then **10 km South**.

Use **distance** and **compass directions** to describe **another** way Captain Gold can take to get back to the Bay.

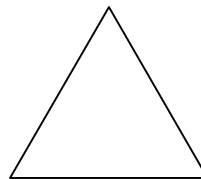
_____.

23. a) Draw the lines of symmetry of the following shapes:

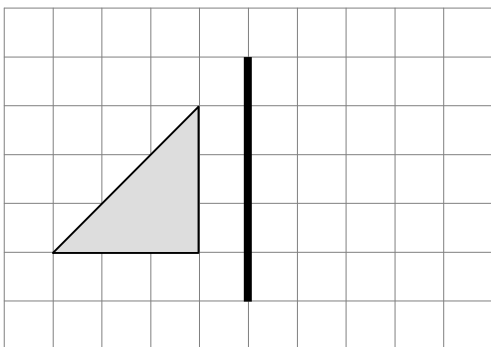
i)



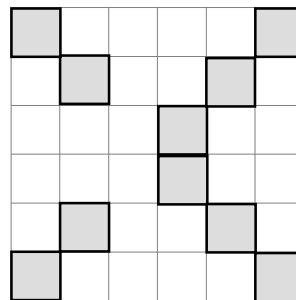
ii)



b) i) Draw the reflection of the shape in the mirror line:



ii) Draw the mirror line to make the pattern symmetrical.



24. Five children drank 9.45 litres of water.

This is how much water four of the children drank:

Tom
1.77 l

Terence
930 ml

Kate
1840 ml

Ben
2 l 90 ml

Christa

a) How much water, **in litres**, did Christa drink?

_____ litres

b) Find the **mean** of the amount of water, **in litres**, drunk by each child.

_____ litres

25. A group of 60 **people** go on an outing to Buskett.

a) $\frac{2}{3}$ are children.

How many **children** are there?

_____ **children**

b) $\frac{3}{5}$ of the children are **girls**.

How many **boys** are there?

_____ **boys**

26. This picture shows a **100g jar of instant coffee**.

It is sold for **96 cents**.

10% of the money goes to the coffee growers.

10% goes to the exporters.

20% goes to the coffee roasters.

35% goes to the shippers.

The rest goes to the retailers.



i) What **percentage** goes to the **retailers**?

_____ **%**

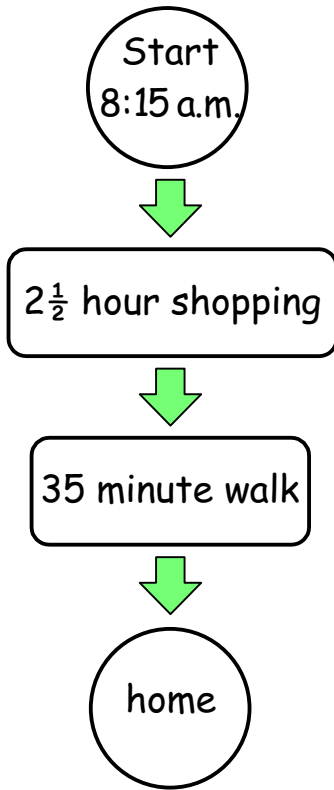
ii) How much money goes to the retailers?

_____ **cents**

iii) Roughly 300g of coffee beans are needed to make one 100g jar of Instant Coffee.
How many kilograms of coffee beans are needed to make **twenty jars** of Instant Coffee?

_____ **kg**

27. a) The diagram shows how Claire spent last Saturday morning.
At what time did Claire **arrive home**?



b) This is part of the timetable for the Gozo ferry.

Trips from Cirkewwa	Trips from Gozo
11:30	11:45
12:00	12:15
12:30	12:45
13:00	13:15
13:30	13:45
14:00	14:15
14:30	14:45
15:00	15:15
15:30	15:45

Tim and Kay want to go for lunch in Gozo. They take the **11:30** trip from Cirkewwa. The ferry trip takes **35 minutes**. After **2 3/4 hours** Tim and Kay have finished their lunch and are at the ferry. Which is the **first trip** they can take back to Malta?

28. One **table** and five **chairs** together cost Lm57.
One **table** and one **chair** together cost Lm21.



a) Find the cost of **one chair**.

Lm _____

b) Find the cost of **one table**.

Lm _____

c) Work out the cost of **two tables** and **ten chairs**.

Lm _____