

**SECONDARY SCHOOL ANNUAL EXAMINATIONS 2004**

Educational Assessment Unit – Education Division

**FORM 1**

**MATHEMATICS (Mental)**

**TIME : 10 minutes**

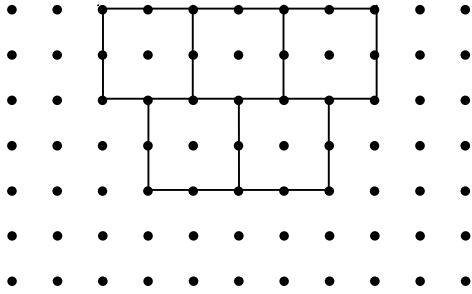
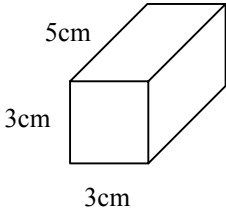
**Name :** \_\_\_\_\_

**Class :** \_\_\_\_\_

Mark

- **ANSWER ALL QUESTIONS.**
- **EACH QUESTION CARRIES 1 MARK.**
- **CALCULATORS, RULERS, PROTRACTORS AND OTHER MATHEMATICAL INSTRUMENTS ARE NOT ALLOWED.**
- **WRITE DOWN YOUR ANSWER ONLY IN THE SPACE PROVIDED.**

**DO NOT  
WRITE  
IN  
THIS  
SPACE**

QUESTIONS	Space for working if required
<p>1. Simplify the fraction <math>\frac{4}{10}</math>.</p> <p style="text-align: right;">Ans: _____</p>	
<p>2. Give 245 to the nearest 100.</p> <p style="text-align: right;">Ans: _____</p>	
<p>3. Tony started laying tiles on the bathroom floor. Here are the positions of the first five tiles he laid. Continue this pattern by adding another tile.</p> <div style="text-align: center;">  </div>	
<p>4.</p> <div style="display: flex; align-items: center;"> <div style="margin-right: 20px;">  </div> <div> <p>What is the volume of the box shown ?</p> <p style="text-align: right;">Ans: _____ cm<sup>3</sup></p> </div> </div>	
<p>5. Write down the factor of 18 from the following numbers:</p> <p style="text-align: center;">4, 5, 9, 11, 12.</p> <p style="text-align: right;">Ans: _____</p>	

6. Use the calendar for the year 2004 to find how many **Thursdays** there are in **September**.

**2004**

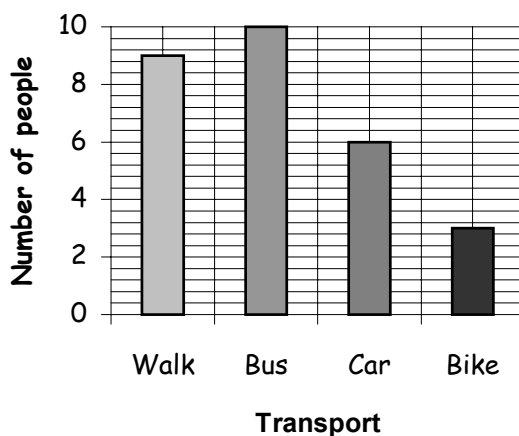
JANUARY	FEBRUARY	MARCH
S 4 11 18 25 M 5 12 19 26 T 6 13 20 27 W 7 14 21 28 T 1 8 15 22 29 F 2 9 16 23 30 S 3 10 17 24 31	S 1 8 15 22 29 M 2 9 16 23 - T 3 10 17 24 - W 4 11 18 25 - T 5 12 19 26 - F 6 13 20 27 - S 7 14 21 28 -	S 7 14 21 28 M 1 8 15 22 29 T 2 9 16 23 30 W 3 10 17 24 31 T 4 11 18 25 - F 5 12 19 26 - S 6 13 20 27 -
APRIL	MAY	JUNE
S 4 11 18 25 M 5 12 19 26 T 6 13 20 27 W 7 14 21 28 T 1 8 15 22 29 F 2 9 16 23 30 S 3 10 17 24 -	S 30 2 9 16 23 M 31 3 10 17 24 T 4 11 18 25 W 5 12 19 26 T 6 13 20 27 F 7 14 21 28 S 1 8 15 22 29	S 6 13 20 27 M 7 14 21 28 T 1 8 15 22 29 W 2 9 16 23 30 T 3 10 17 24 - F 4 11 18 25 - S 5 12 19 26 -
JULY	AUGUST	SEPTEMBER
S 4 11 18 25 M 5 12 19 26 T 6 13 20 27 W 7 14 21 28 T 1 8 15 22 29 F 2 9 16 23 30 S 3 10 17 24 31	S 1 8 15 22 29 M 2 9 16 23 30 T 3 10 17 24 31 W 4 11 18 25 - T 5 12 19 26 - F 6 13 20 27 - S 7 14 21 28 -	S 5 12 19 26 M 6 13 20 27 T 7 14 21 28 W 1 8 15 22 29 T 2 9 16 23 30 F 3 10 17 24 - S 4 11 18 25 -
OCTOBER	NOVEMBER	DECEMBER
S 31 3 10 17 24 M 4 11 18 25 T 5 12 19 26 W 6 13 20 27 T 7 14 21 28 F 1 8 15 22 29 S 2 9 16 23 30	S 7 14 21 28 M 1 8 15 22 29 T 2 9 16 23 30 W 3 10 17 24 - T 4 11 18 25 - F 5 12 19 26 - S 6 13 20 27 -	S 5 12 19 26 M 6 13 20 27 T 7 14 21 28 W 1 8 15 22 29 T 2 9 16 23 30 F 3 10 17 24 31 S 4 11 18 25 -

Ans: \_\_\_\_\_

7. Lisa has drawn a bar chart to show how the students in her class travel to school.

How many students **walk** to school?

**How Class 7C get to school**



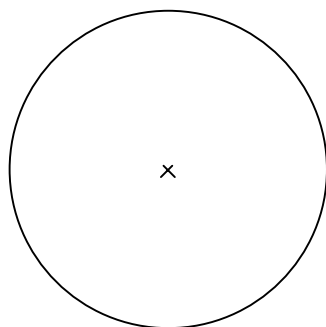
Ans: \_\_\_\_\_

8. Which is the larger fraction

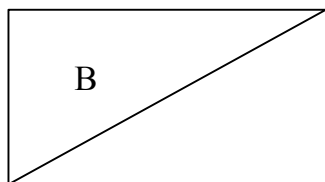
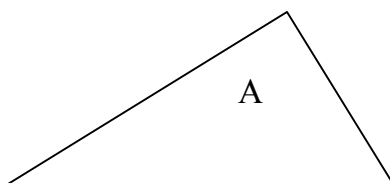
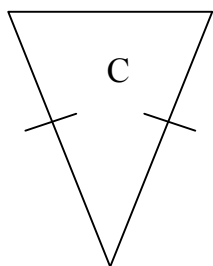
$$\frac{1}{2} \text{ or } \frac{3}{5} ?$$

Ans: \_\_\_\_\_

9. Draw a diameter on the given circle.



10. Which of these triangles is isosceles?



Ans: \_\_\_\_\_

# SECONDARY SCHOOL ANNUAL EXAMINATIONS 2004

Educational Assessment Unit –Education Division

**FORM 1**

**MATHEMATICS ( Main Paper )**

**Time : 1h 50min**

Question	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total Main	Mental	Global Mark
Mark																		

**DO NOT WRITE ABOVE THIS LINE**

**Name :** \_\_\_\_\_

**Class :** \_\_\_\_\_

**CALCULATORS ARE NOT ALLOWED**

**ANSWER ALL QUESTIONS.**

1. a) Add up :  $1 + 20 + 300 + 4000$ . \_\_\_\_\_

b) Write the number **9876** as a sum as in (a) .

$9876 =$  \_\_\_\_\_  $+$  \_\_\_\_\_  $+$  \_\_\_\_\_  $+$  \_\_\_\_\_ .

( 4 marks )

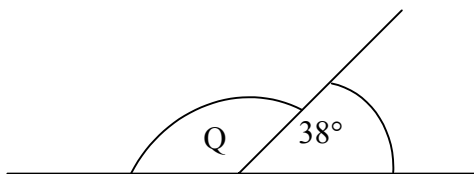
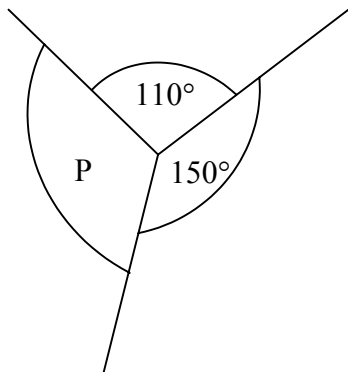
2. Fill in the blank spaces in the following sentences:

a) There are \_\_\_\_\_ centimetres in a metre.

b) To change from metres to millimetres multiply by \_\_\_\_\_.

( 4 marks )

3. Find the value of each angle marked with a letter. Write down the reason in each case.

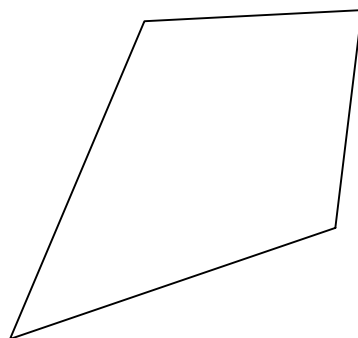


$P =$  \_\_\_\_\_  $^{\circ}$  Reason : \_\_\_\_\_ .

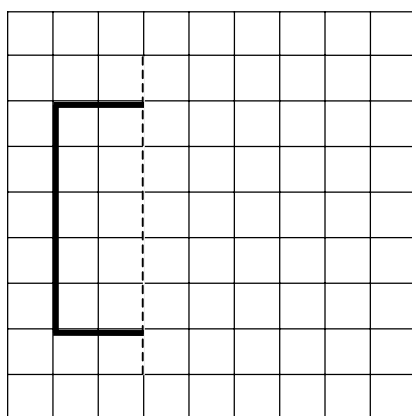
$Q =$  \_\_\_\_\_  $^{\circ}$  Reason : \_\_\_\_\_ .

( 4 marks )

4. a) Draw the line of symmetry of the given shape.

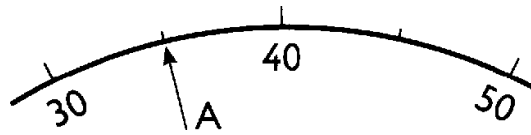


- b) Complete the drawing below so that the broken line is the line of symmetry.



( 4 marks )

- 
5. a) Arrow 'A' on the dial shows the weight of an object in kilogrammes. What weight is the scale reading ?



\_\_\_\_\_ kg.

- b) Fill in the missing commands so that the turtle draws a square with sides each of length 50 turtle steps.

PD REPEAT 4 [ FD \_\_\_\_\_ RT \_\_\_\_\_ ]

( 4 marks )

- 
6. a) Work out :

i)  $2.3 + 3.7$

Ans: \_\_\_\_\_

ii)  $10.92 - 6.31$

Ans: \_\_\_\_\_

b) Fill in:  $20 \div \boxed{\phantom{00}} + 2 = 7$

( 6 marks )

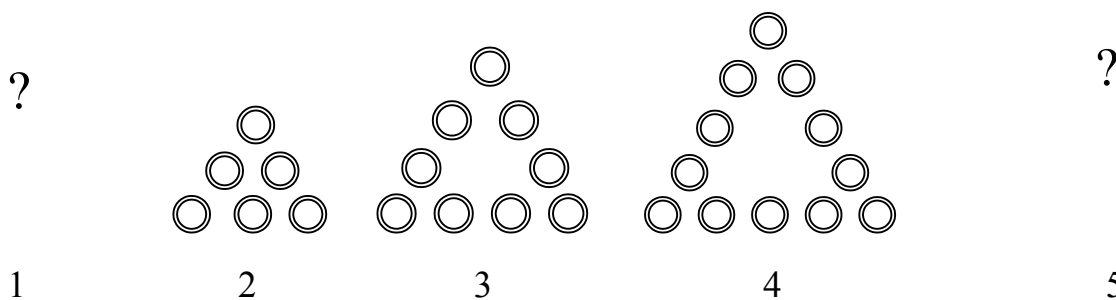
- 
7. A room is 8m long and 6m wide. It is to be carpeted.

- i) What area of carpet is needed?

- ii) The carpet costs Lm2 per m<sup>2</sup>. What is the total cost?

( 6 marks )

8. Francesca is making patterns using hoops



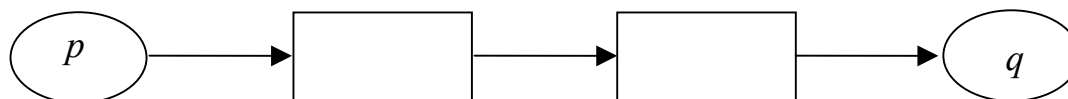
- i) Draw the first pattern.  
ii) Draw pattern 5.

( 6 marks )

9. The rule for finding the numbers in the bottom row is:  
“ add 3 and then multiply by 2”

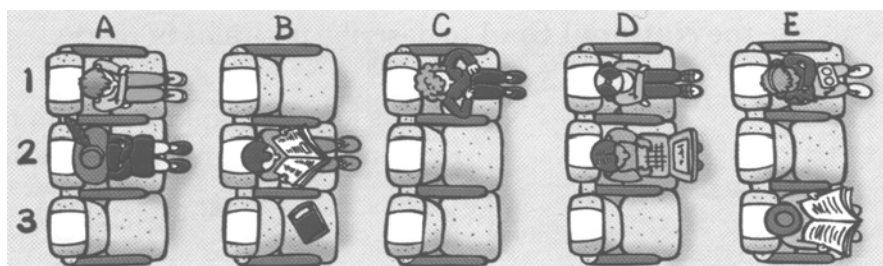
$p$	1	2	3	4	5	6
	↓	↓				
$q$	8	10				

- i) Complete the table.  
ii) Make a function machine like this one for the rule given above.



( 6 marks )

10. The diagram shows part of a seating plan in an aeroplane.



- i) What is the man in seat **D2** doing ? \_\_\_\_\_  
ii) In which seats are the people reading the newspaper sitting? \_\_\_\_\_ .  
iii) Name an empty seat. \_\_\_\_\_ .

( 6 marks )



11. Thomas is doing a survey about the traffic passing by his house during the morning rush-hour.

He notes down each type of vehicle that he sees. Here are his results:

car	car	car	lorry	car	bicycle	bicycle
van	car	car	car	car	bus	car
lorry	car	car	motorbike	bus	car	car
car	car	lorry	van	car	car	
car	car	bus	bicycle	car	car	
car	car	motorbike	lorry	lorry	lorry	
bicycle	car	car	car	lorry	lorry	

- i) Complete the following chart:

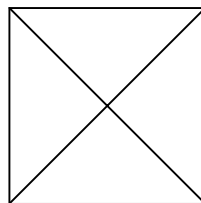
Type of vehicle	Tally	Frequency
bicycle		
motorbike		
car		
van		
lorry		
bus		
Total		

- ii) How many vehicles did Thomas see altogether? \_\_\_\_\_.

- iii) What was the most common vehicle? \_\_\_\_\_.

( 8 marks )

12. a) Shade  $\frac{1}{2}$  of this shape:



- b) Work out :  $\frac{1}{6} + \frac{2}{6}$  .

Simplify your answer.

- c) Find  $\frac{2}{5}$  of 60 minutes.

\_\_\_\_\_

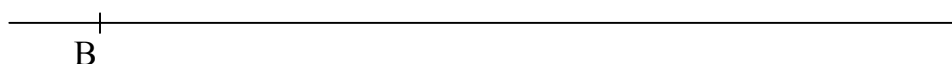
\_\_\_\_\_ mins.

- d) Write  $9\frac{3}{100}$  as a decimal.

\_\_\_\_\_

( 8 marks )

13. i) Mark the point C on the line shown, so that  $BC = 8\text{cm}$ .  
 ii) Use a ruler and a protractor to construct rectangle ABCD where AB is 6cm long and BC is 8cm.



- iii) Draw the diagonal AC and measure its length.

AC is \_\_\_\_\_ cm long.

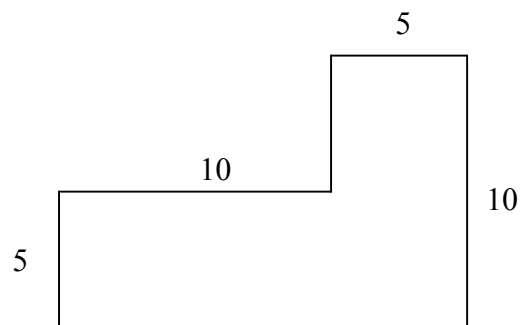
( 8 marks )

14. a) 5 oranges out of a bag of 20 are bad. What is the percentage of bad oranges?

b) Complete the sentence :

50% of 80m is \_\_\_\_\_m.

c) Fill in the missing lengths of the diagram. All lengths are in metres.



Calculate the perimeter.

\_\_\_\_\_ m.

( 8 marks )

15. a) The time taken to cook a turkey is 20minutes plus 40minutes for every kilogram weight

i) How long will a 4kg turkey take to cook? Give your answer in hours.

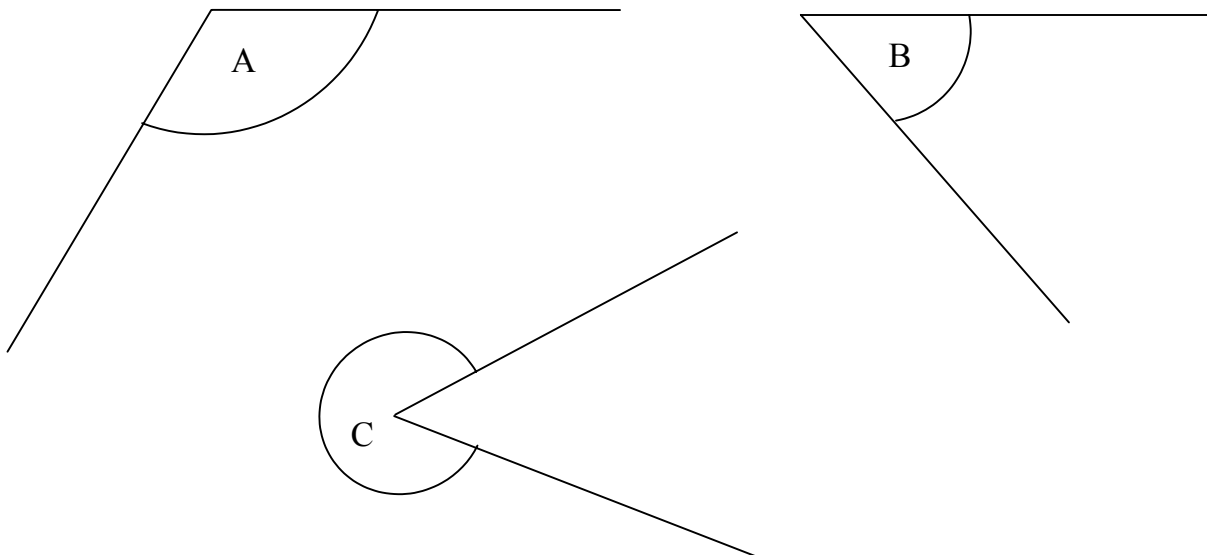
\_\_\_\_\_ hrs.

ii) Peter wants to have the turkey ready for 1p.m. When should he start cooking?

\_\_\_\_\_.

b) Write down which of the angles below are:

i) obtuse \_\_\_\_\_ ii) reflex \_\_\_\_\_ iii) acute \_\_\_\_\_.



(8 marks)