# SECONDARY SCHOOLS ANNUAL EXAMINATIONS – 2002

**Educational Assessment Unit – Education Division**

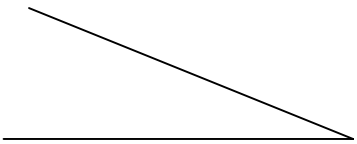
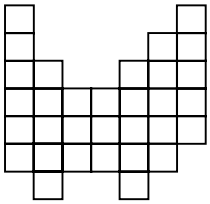
**FORM 2 MATHEMATICS (NON CALCULATOR PAPER) TIME: 10 min.**

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.
- THIS PAPER CONTAINS 10 QUESTIONS.

***DO NOT WRITE IN THIS SPACE***

| | QUESTIONS | SPACE FOR WORKING |
|---|---|---|
| 1. | Work out: $36 \times 15$<br><br>**Ans**_____ | |
| 2. | A packet of biscuits costs 28c. How many packets can Kim buy with Lm1?<br><br>**Ans**_____ | |
| 3. | What is the value of **7** in the number 6874?<br><br>**Ans**_____ | |
| 4. | Complete this function machine.<br><br>48 → ÷ 6 → + 3 → ☐ | |
| 5. | Which number between 1 and 10 is even and square?<br><br>**Ans**_____ | |
| 6. | James is using **LOGO**. Draw what he sees when he types these commands.<br><br>**RT 30**<br><br>**FD 100 BK 100**<br><br>**LT 60 FD 100** | |
| 7. | This angle is about<br><br>A) 40° B) 22°<br><br>C) 170° D) 68°<br><br>**Ans**_____ |  |
| 8. | What is $\frac{5}{8}$ of 6.72 m? Give the answer in centimetres.<br><br>**Ans**_____ | |
| 9. | Shade 75% of this shape. |  |
| 10. | Estimate $\sqrt{26} - \sqrt[3]{8}$.<br><br>**Ans**_____ | |

# SECONDARY SCHOOLS ANNUAL EXAMINATIONS 2002

Educational Assessment Unit – Education Division

**FORM 2** **MATHEMATICS (Main Paper)** **TIME: 1h 50 min**

| 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**

**ANSWER ALL QUESTIONS**

Name _____ Class _____

1. a) Write these numbers in order of size, smallest first.

64.47 6.74 0.674 6.47

_____ , _____ , _____ , _____ .

b) Work out:

124.3 – 68.57

(4 marks)

2. Work out

a) $6 - 2 \times 3$

b) $(8 + 4) \div 4$

c) $30 \div (5 - 2)$

d) $24 \div 6 + 2$

(4 marks)

3. Solve the equations:

a) $\frac{a}{8} = 4$

b) $2x - 3 = 1$

(4 marks)

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4. a) Write down the next number in each pattern.

i) 15, 11, 7, 3, _____

ii) 9, 16, 25, 36, _____

b) Find 45% of Lm9.60

(4 marks)

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5. a) Write

i) 487 correct to the nearest 10.

ii) 573 correct to the nearest 100.

b) Work out, correct to 1 decimal place:

$717.64 \div 100$

(4 marks)

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6. a) Complete:

i) 48 mm = _____ cm

ii) 1.56 m = _____ cm

iii) 4 litres = _____ $cm^3$

b) If $p = 3a^2 - 2b$, find the value of $p$ when $a = 4$ and $b = 3$.

(6 marks)

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7. a) Find the least common multiple of 4, 6, and 9.

b) Work out:

$$4\frac{5}{6} - 3\frac{3}{4}$$

c) Express 60 as a product of its prime factors.

(6 marks)

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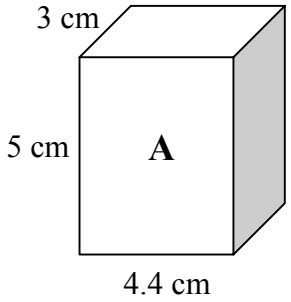
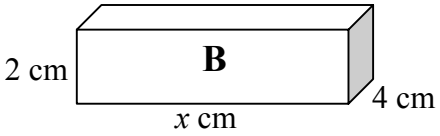
8. a) A sports programme begins at 6.25 p.m. and finishes at 8.15 p.m. How long was the programme? (Give your answer in hours and minutes.)

b) Find the volume of cuboid A.




c) The volume of cuboid B is 64 $cm^3$. What is the length $x$ ?




(6 marks)

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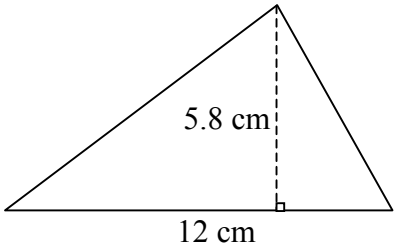
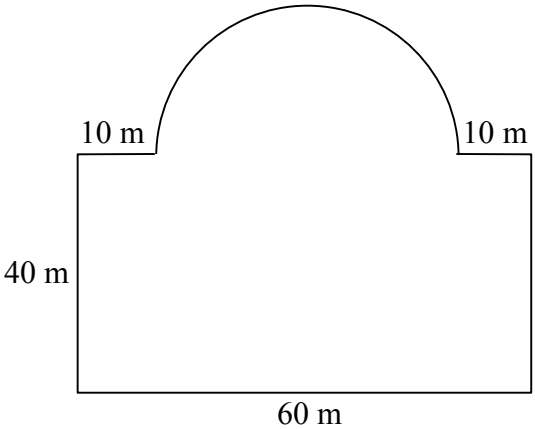
9. a) What is the area of this triangle?




b) The figure shows a pool. The pool has the shape of a rectangle with a semi-circle at one end.

i) What is the radius of the semi-circle?

ii) What is the total distance round the pool?
(Give your answer correct to 2 decimal places.)




(6 marks)

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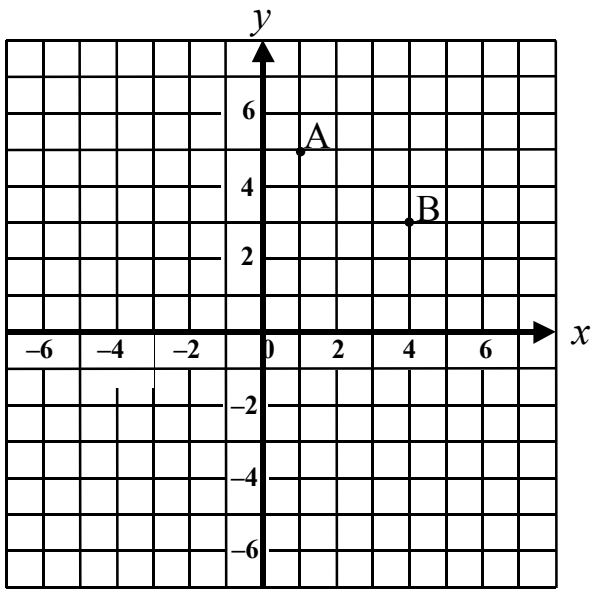
10. a) Write down the co-ordinates of points A and B.

A (  ,  )

B (  ,  )




b) Plot point C (1, –4) and point D (–2, 3).

c) Join AB, BC, CD, and DA.

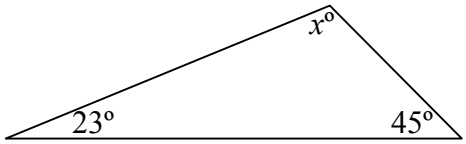
d) ABCD is a _____.

e) Draw the line of symmetry.

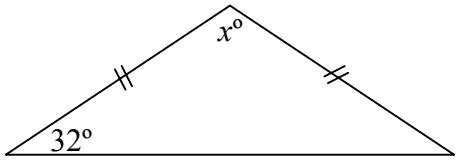
(6 marks)

11. Find the size of the angle marked $x^o$ for each of these diagrams.

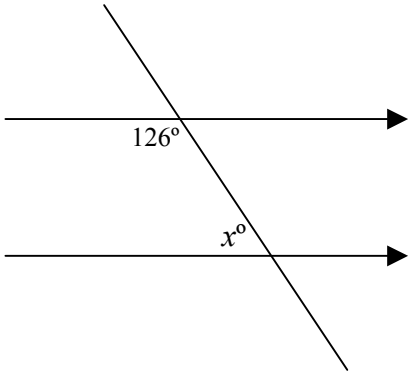
a)



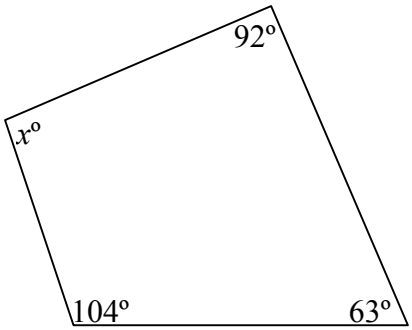

b)




c)

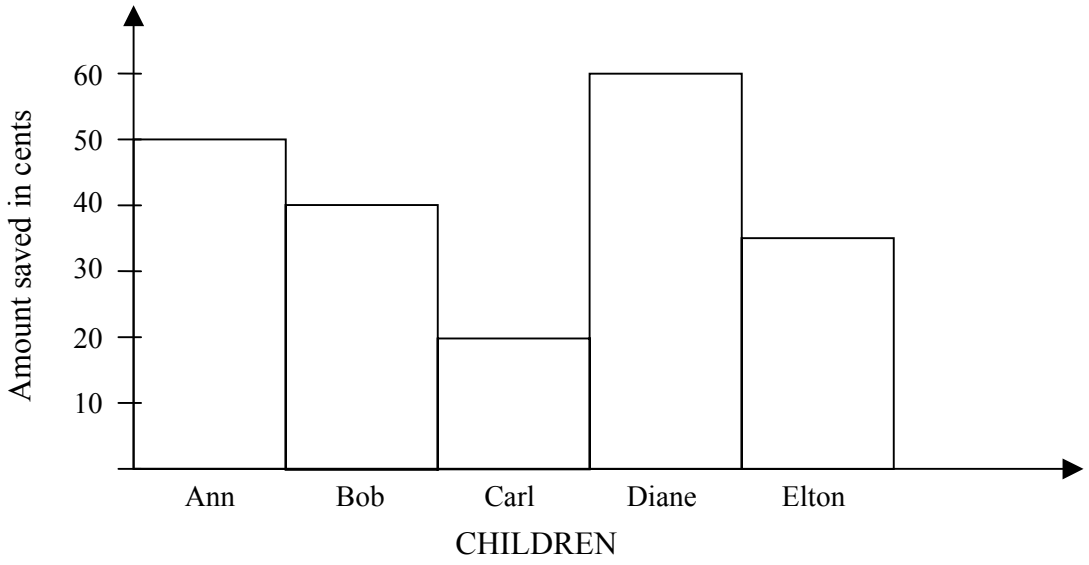



d)




(8 marks)

12. The bar chart shows the amount of money saved by a group of five children.




a) How much money has each child saved?

Ann _____ Bob _____ Carl _____

Diane _____ Elton _____.

b) How much money do the five children have altogether?

c) What is the mean amount of money saved?

d) What is the difference between the largest and the smallest amount of money?

(8 marks)

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13. a) Jane throws an ordinary six-sided dice. What is the probability that she will get

i) a five

ii) an odd number

iii) a prime number

13. b) One letter is chosen at random from the letters in the word **C A L C U L A T O R S**. What is the probability that it is :

i) the letter **O**

ii) the letter **C**

iii) a vowel

iv) not the letter **T**

v) the letter **L** or **R**

(8 marks)

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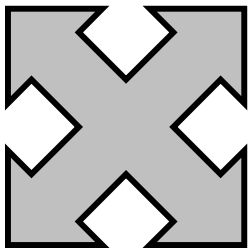
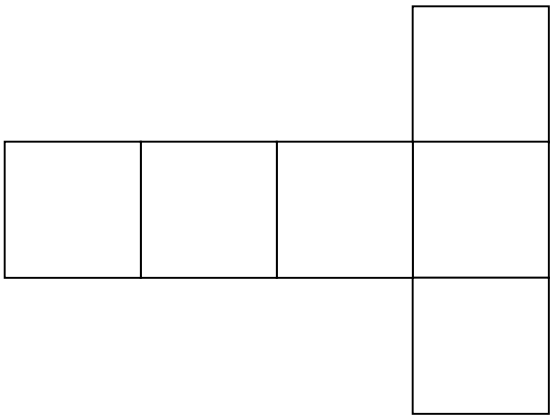
14. a) Look at this figure.



i) What is its order of rotational symmetry?

ii) How many lines of symmetry does it have?

b) This is a net for a cube.



i) How many edges does the cube have?

ii) How many faces does the cube have?

iii) How many vertices does the cube have?

(8 marks)

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15. In a class of 30 students, the favourite animal of each student was recorded as follows:
(**B** – bird, **C** – cat, **D** – dog, and **F** – fish)

| | | | | | |
|---|---|---|---|---|---|
| **D** | **D** | **C** | **F** | **B** | **D** |
| **F** | **F** | **C** | **D** | **C** | **D** |
| **C** | **D** | **D** | **B** | **D** | **F** |
| **B** | **C** | **B** | **F** | **C** | **D** |
| **B** | **F** | **F** | **C** | **D** | **C** |

a) Fill in the frequency (*f*) table.

| Favourite Animal | Tally | Frequency (*f*) |
|---|---|---|
| Bird (**B**) | | |
| Cat (**C**) | | |
| Dog (**D**) | | |
| Fish (**F**) | | |
| | Total | 30 |

b) Draw and label a bar chart to show the information in the frequency table.

(8 marks)



**END OF PAPER**