

Section 1

Computation

(20 Marks)

Answer ALL the questions in this section. Clearly show ALL your working in the space provided.

1. (a) Here are 6 number cards

7 **7** **7**

8 **8** **8**

Use 5 of the number cards to make this problem correct.

$$\begin{array}{r}
 \square \quad \square \quad \square \\
 - \quad \square \quad \square \\
 \hline
 6 \quad 9 \quad 1
 \end{array}$$

(3 marks)

(b) Choose **two** different numbers from the list below which when multiplied together give 10 000.

20, 50, 200, 500, 10 000

(2 marks)

2. (a) Which two numbers when multiplied give **24**, and when added give **11**?

_____ and _____

(2 marks)

(b) Write a number **greater than 30 but less than 100** in each space.

	Odd	Even
Multiple of 9		
Multiple of 7		

(4 marks)

3. Write the largest possible **three digit odd number** using three different digits.

_____ (3 marks)

4. Calculate the following:

(a) $5 + 4 \times 7$

(2 marks)

(b) $20\,000 - 83$

(2 marks)

(c) $7 + 0.82 + 1.5$

(2 marks)

Section 2 Problem- Solving (30 Marks)

Answer **ANY THREE** questions in this section. Clearly show **ALL** your working in the space provided after each question. (10 marks each)

5. Here is the **start** of a pattern formed from dots and lines.

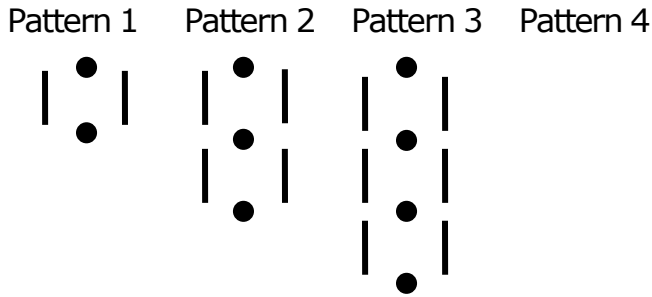


Figure 1: Patterns of dots and lines

(a) Draw pattern 4 in the space above. (1 mark)

(b) Complete the table which shows the number of dots and lines in each pattern.

Pattern number	Pattern 1	Pattern 2	Pattern 3	Pattern 4
No. of dots	2	3	4	
No. of lines	2	4	6	

(2 marks)

(c) If the patterns in Figure 1 are continued:
(i) How many dots will there be in pattern 8?

_____ (3 marks)

(ii) Which pattern will have 20 lines?

_____ (2 marks)

(iii) How many lines will there be in the pattern with 8 dots?

_____ (2 marks)

6. (a) There are 23 children and 3 adults going on a boat trip. The total bill for the trip is \$672.50 as shown below:

Children	\$575.00
Adults	<u>\$ 97.50</u>
	\$672.50



(i) How much does the boat trip cost for one adult?

(2 marks)

(ii) What would be the total bill if an extra 9 children went on the trip?

(5 marks)

(b) Tickets for a concert cost \$7.25 each for children and twice that amount for adults.

How much should a family of 5 adults and 6 children pay to attend the concert?

(3 marks)

7. The table shows the morning Timetable for three School Buses taking students from the same Park to three different schools. Study the table then answer the questions that follow.

The table shows the arrival time for each stop.

	Park	Shop	Post Office	School
Bus 1	7:21	7:39	8:25	8:40-CLS
Bus 2	7:55	8:15	8:35	8:59-VPS
Bus 3	7:35	8:00	8:45	8:30-MTS

(a) Which bus is the first to arrive at the Park?

_____ (1 mark)

(b) Which bus arrives at the Shop last?

_____ (1 mark)

(c) How long does it take **each** bus from the time it arrives at the **Park** to the time it arrives at the **School**?

Bus 1

_____ (2 marks)

Bus 2

_____ (2 marks)

Bus 3

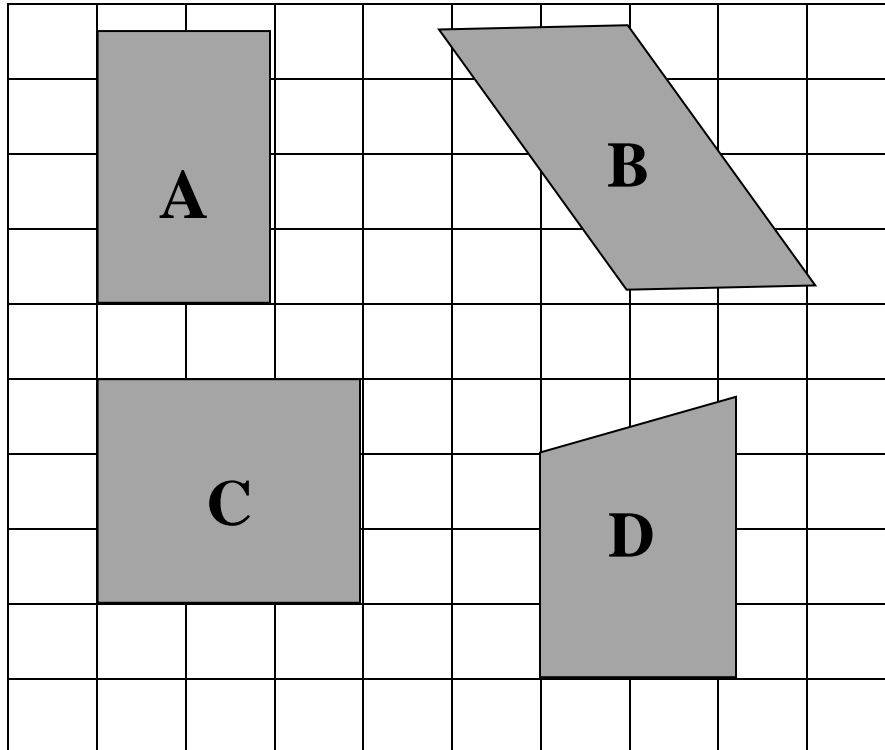
_____ (2 marks)

(d) If all Schools begin at 9:00am, students from which bus will have the shortest time before school begins?

Give a reason for your answer.

(2 marks)

8. Here are four quadrilaterals shown on a square grid.



Write the letter(s) of each quadrilateral in the correct column in the table below. There could be more than one answer to a description below.

Has no right angles		(1 mark)
Has 1 pair of oblique parallel sides		(1 mark)
Has one or more obtuse angles		(2 marks)
Which shape can be divided vertically to give 2 triangles? Draw the line on the shape.		(2 marks)
Which shape can be divided into a rectangle and a triangle? Draw the line on the shape.		(2 marks)
Calculate the sum of the angles in shape C .		(2 marks)

9. Mr. Oliver asked every child in class 6A how many pairs of shoes they own. All the children responded. Mr. Oliver used this information to construct the bar chart below.

Everyone owns at least 1 pair of shoes and no one owns more than 5 pairs.

Graph showing pairs of shoes for students in Mr Oliver's Class



(a) Use this information to complete the bar chart: **5 students own two pairs of shoes**. Draw the bar on the graph above.

(2 marks)

(b) How many students own 4 pairs of shoes?

_____ (1 mark)

(c) How many students are there altogether in Mr. Oliver's class?

_____ (3 marks)

(d) How many pairs of shoes do all of the students in class 6A own altogether?

_____ (4 marks)