SECTION I

ANSWER ALL QUESTIONS IN THIS SECTION

Write your answers in the spaces provided. Remember to show all working.

1. (a) Calculate the value of $2\frac{3}{4} \div \frac{5}{8}$, expressing your answer as a fraction. [3 marks]

(b) Convert $2\frac{7}{8}$ to decimal form correct to 1 decimal place. [2 marks]

(c) Express 14.995 correct to 2 significant figures. [1 mark]

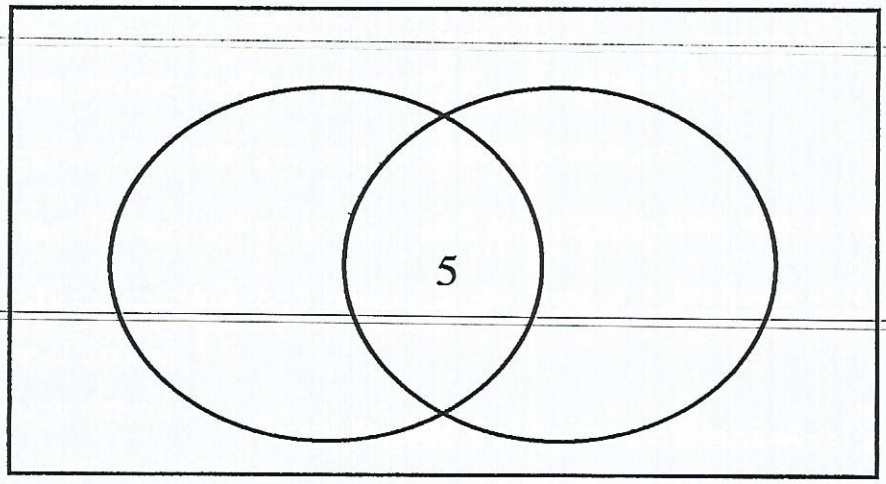
2. In a class, there are 40 students.

17 students do Science.

15 students do Art.

5 students do both Science and Art.

(a) Label and complete the Venn diagram to show the above information. [3 marks]



(b) How many students do only one subject? [2 mark]

(c) What is the probability that a student chosen at random does both subjects? [1 mark]

3. (a) Simplify the expressions.

(i) $8a - 4b + 5b$ [1 mark]

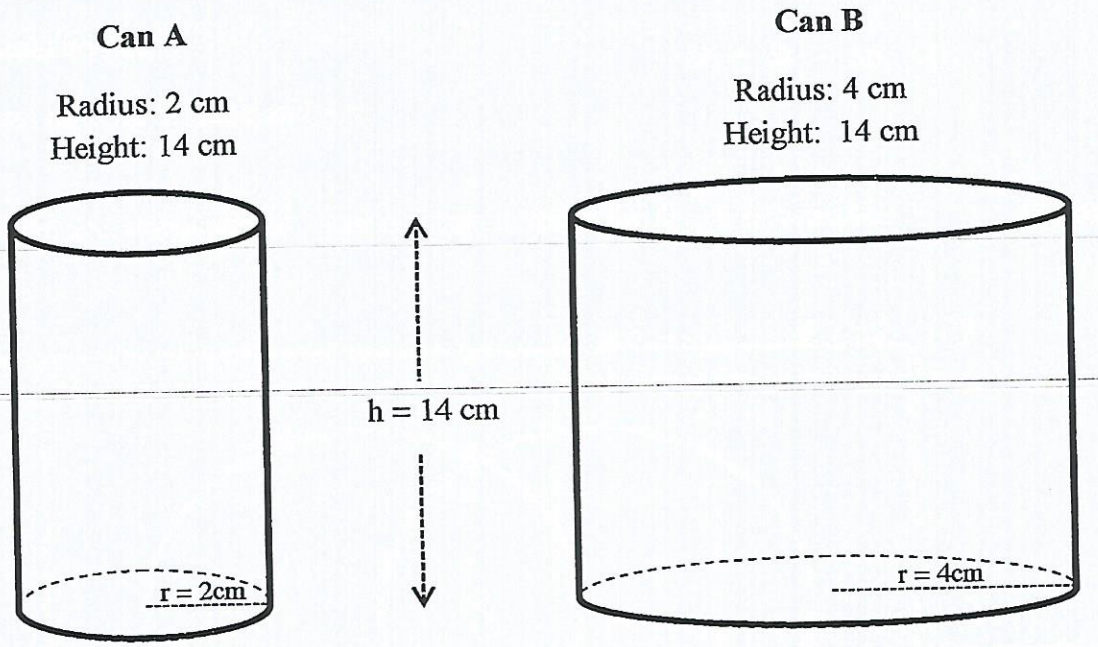
(ii) $2x\,(3x + 5) - 6x^2$ [2 marks]

(b) Factorize completely

(i) $2a + 4b$ [1 mark]

(ii) $5ab^2 - 15a^2b^3$ [2 marks]

4. In the cafeteria, two different sizes of canned soft drinks are sold, **Can A** and **Can B, not drawn to scale.**



(a) What is the volume of **Can A** in $\mathbf{cm^3}$? $\left(\text{Use } \pi = \frac{22}{7}\right)$ [2 marks]

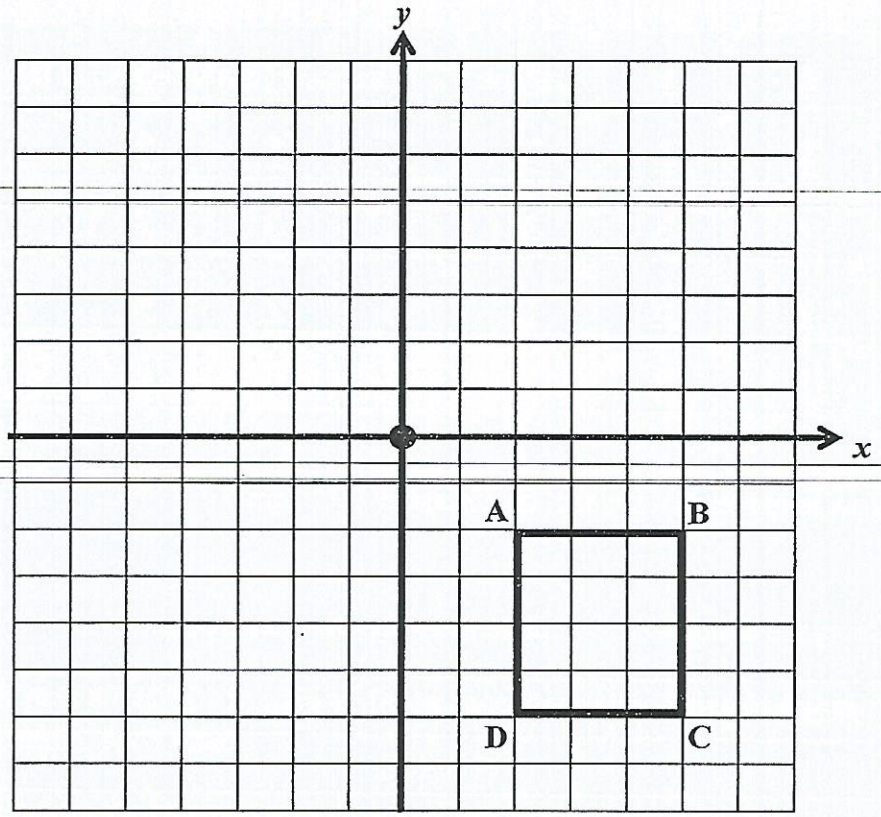
(b) Convert the volume of **Can A** from $\mathbf{cm^3}$ to **litres**. [2 marks]

(c) Calculate the **ratio** of the ***volume of Can A*** to the ***volume of Can B***. [2 marks]

5. The quadrilateral **ABCD** is shown in the diagram.

(a) **ABCD** is reflected in the y - axis to produce its image **A′B′C′D′**.

Draw and label the image **A′B′C′D′** on the diagram below. [4 marks]



(b) Draw the lines of symmetry for **ABCD** on the diagram above. [2 marks]

6. The calendar below shows the number of texts Ria sent during the month of April. The numbers of texts sent are bold and underlined (e.g., **3** represents three texts sent on that day).

April						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
1 **5**	2 **1**	3 **4**	4 **3**	5 **2**	6 **5**	7 **3**
8 **5**	9 **3**	10 **2**	11 **4**	12 **1**	13 **1**	14 **2**
15 **4**	16 **3**	17 **3**	18 **5**	19 **3**	20 **3**	21 **1**
22 **2**	23 **5**	24 **1**	25 **3**	26 **2**	27 **4**	28 **5**
29 **3**	30 **2**					

(a) How many texts were sent on Thursday 19th April? [1 mark]

(b) Using the data given, complete the frequency table below. [2 marks]

Number of texts	Tally	Frequency
1	𝍸	5
2		
3		
4		
5		

(c) What is the total number of texts Ria sent? [1 mark]

(d) Calculate the mean number of texts Ria sent per day. [2 marks]

SECTION II

ANSWER TWO (2) QUESTIONS ONLY FROM THIS SECTION

7. (a) Lewis pays US $120.00 as a 10% down payment for his family's Caribbean vacation. The exchange rate is **US $1.00 = TT $6.50**.

(i) What is Lewis' down payment in TT dollars? [1 mark]

(ii) What is the total cost for the vacation in TT dollars? [2 marks]

(b) Mrs. Gift puts $7 200.00 in a fixed deposit account earning simple interest at a rate of 8% per annum, for 7 years.

(i) Calculate the interest earned on her investment. [2 marks]

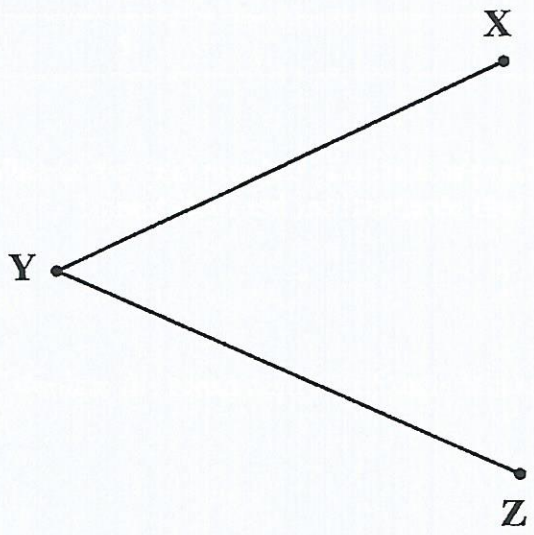
(ii) What is the total amount she will receive from her investment? [1 mark]

7. (c) For this question, you are required to show all construction lines.

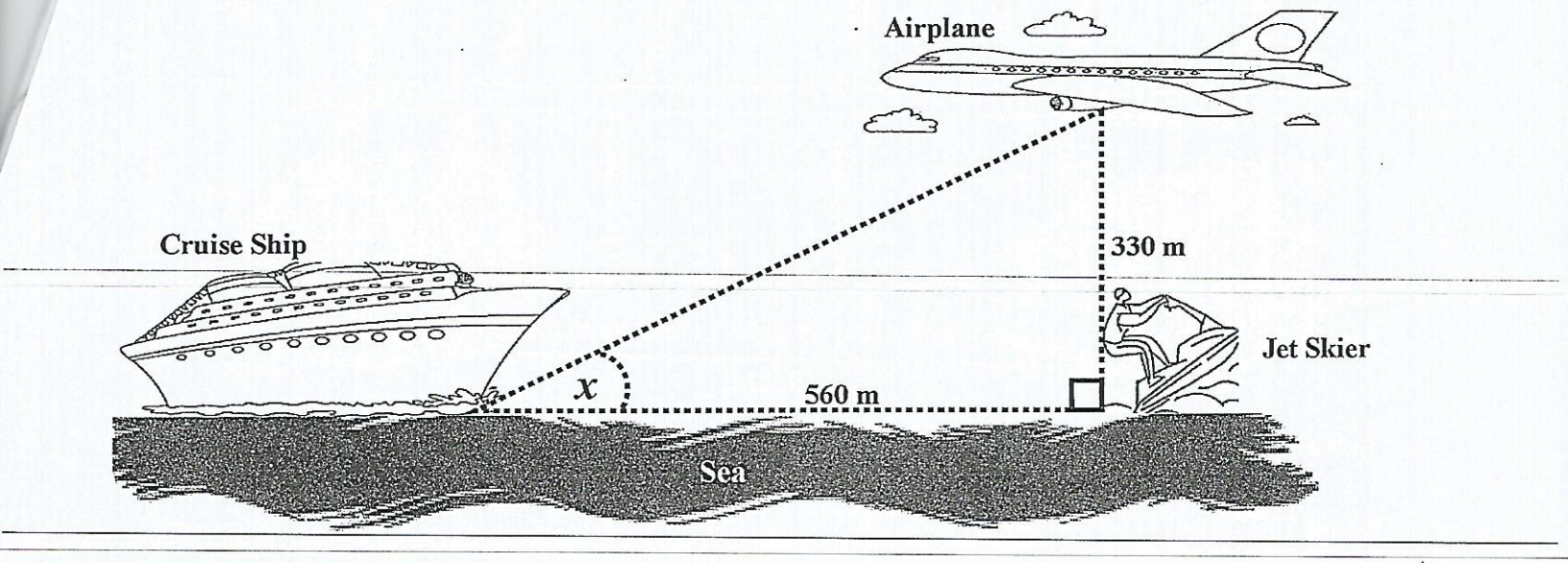
Using a pair of compasses, ruler and pencil only,

(i) Construct the triangle **LMN**, with lengths **LM = MN = LN = 5cm.** [3 marks]

(ii) Bisect the angle **XYZ.** [3 marks]



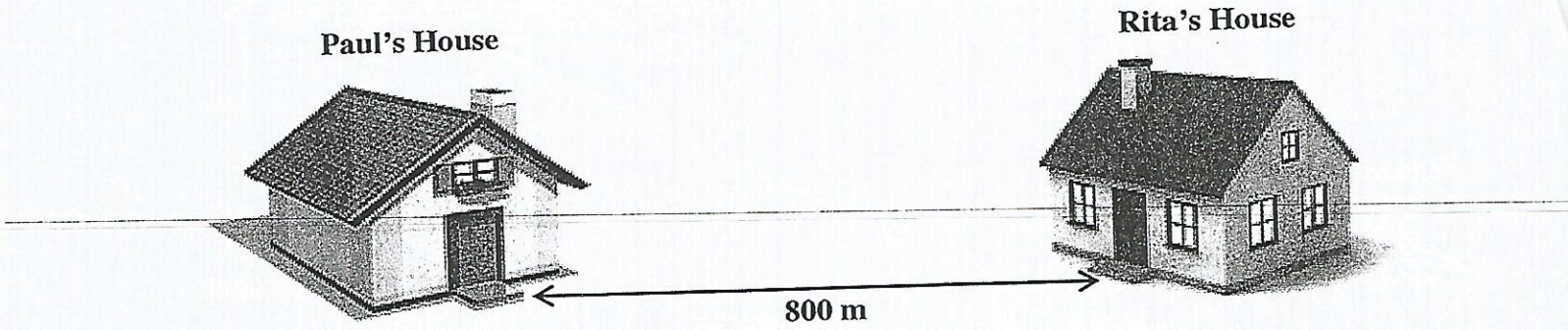
8. (a) The diagram shows an airplane, a cruise ship, and a jet skier, **not drawn to scale**.
The plane is 330 m above sea level and the cruise ship is 560 m from the jet skier.



(i) What is the distance between the airplane and the cruise ship? [3 marks]

(ii) Calculate the size of the angle x as shown in the diagram. [3 marks]

8. (b) Paul goes to Rita's house to study. He leaves home at 3:55 p.m. and arrives at Rita's house at 4:35 p.m. Paul lives 800 m away from Rita. Paul and Rita's homework assignment is to draw a map of the neighbourhood, using a scale of **1 cm to represent 200 m**.



(i) How many centimetres are used to represent the actual distance between Paul's house and Rita's house on the scale drawing for the map? [1 mark]

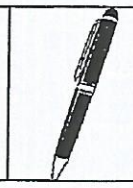
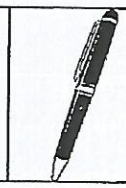
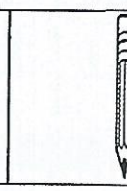
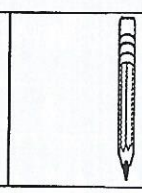
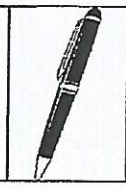
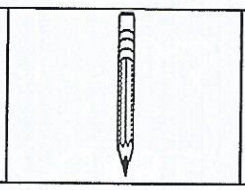
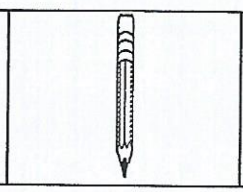
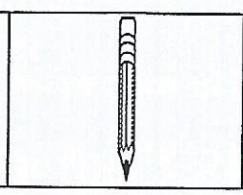
(ii) What is the distance from Paul's house to Rita's house, in **kilometres**? [1 mark]

(iii) How many minutes did Paul take to arrive at Rita's house? [1 mark]

(iv) How long did Paul take to arrive at Rita's house, in **hours**? [1 mark]

(v) What is Paul's average speed while walking from his house to Rita's house, in **kilometres per hour**? [2 marks]

9. (a) The number of pens and pencils Raj and Ann bought and the amounts each spent are shown.

Raj						**Total Cost** **$51.00**
Ann						**Total Cost** **$39.00**

Use x to represent the cost in dollars of one pen and y to represent the cost in dollars of one pencil.

(i) Write an equation using x and y to represent the total cost of the pens and pencils **Raj** bought.

[2 marks]

(ii) Using a pair of simultaneous equations, determine the cost of **1 pen** and **1 pencil**.

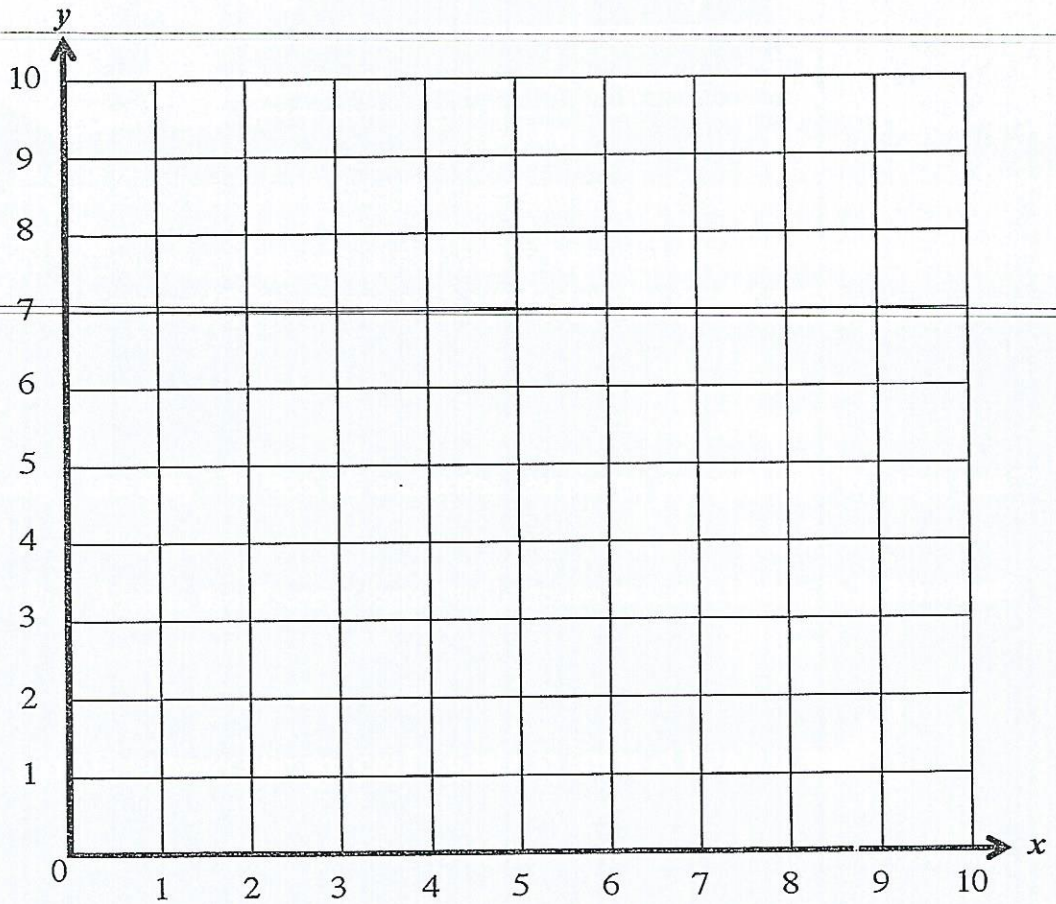
[4 marks]

9. (b) The equation $y = 2x + 1$ gives the relationship between x and y.

(i) Use the equation to complete the table. [2 marks]

x	0	1	2	3	4
y		3			

(ii) Using the grid provided, draw the graph of $y = 2x + 1$. [3 marks]



(iii) State the ***y intercept*** for the graph $y = 2x + 1$. [1 mark]

END OF TEST