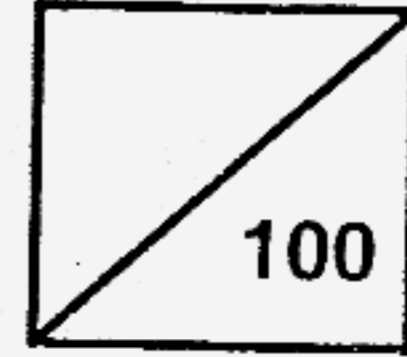




Rosyth School
Second Semestral Assessment 2006
Mathematics
Primary 5

Name: _____

Total



Class: Pr 5-_____ Register No. _____

Duration: 2 hr 15 min

Date: 31 October 2006

Parent's Signature: _____

Instructions to Pupils:

1. Do not open this booklet until you are told to do so.
2. Follow all instructions carefully.
3. This paper consists of 2 booklets, Booklet A and Booklet B.
4. For questions 1 to 15 in Booklet A, shade the correct ovals on the Optical Answer Sheet (OAS).
5. ANSWER ALL THE QUESTIONS.

	Maximum	Marks Obtained
Booklet A	20	
Booklet B Section B	30	
Booklet B Section C	50	
Total	100	

* This paper consists of 25 pages altogether.

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Section A

Questions 1 to 10 carry 1 mark each. Questions 11 to 15 carry 2 marks each.
For each question, four options are given. One of them is the correct answer. Make
your choice (1, 2, 3 or 4). Shade the correct oval (1, 2, 3 or 4) on the Optical Answer
Sheet. (20 marks)

1. What is three hundred and one thousand, and twenty-one in numerals?

- (1) 30 121
- (2) 31 021
- (3) 300 121
- (4) 301 021

2. Fill in the missing number in the box provided.

6 705, , 4 303, 3 102, 1 901

- (1) 5 504
- (2) 5 505
- (3) 5 540
- (4) 5 604

3. Express 150 as a fraction of 1800.

- (1) $\frac{1}{12}$
- (2) $\frac{1}{6}$
- (3) $\frac{5}{12}$
- (4) $\frac{5}{6}$

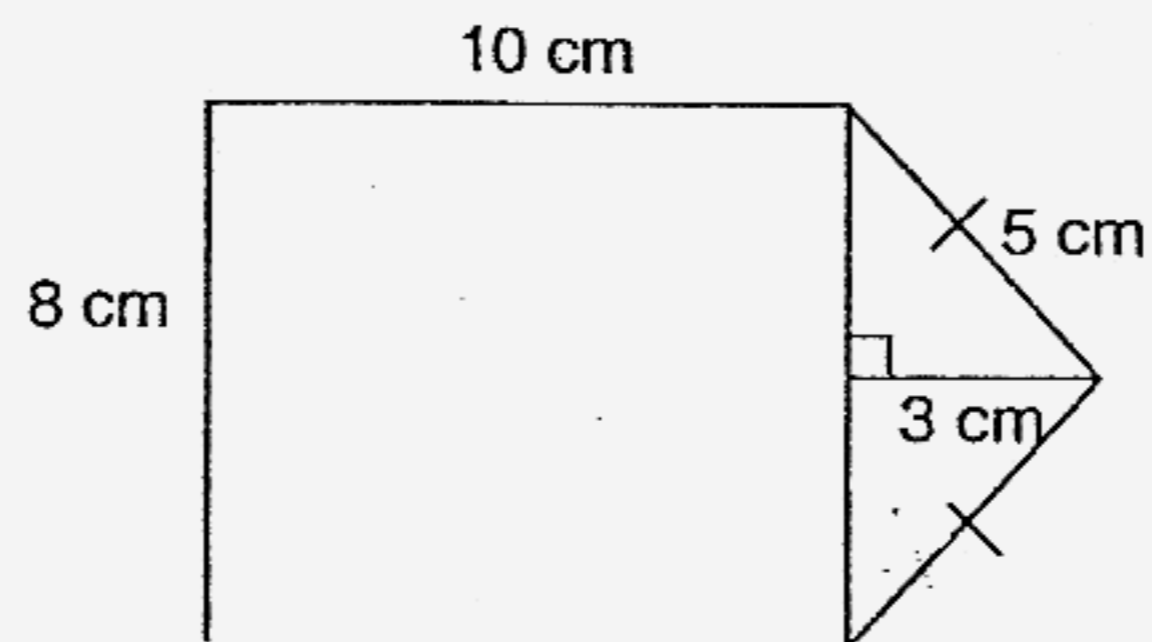
4. Express $4\frac{7}{8}$ as a decimal.

- (1) 0.875
- (2) 0.880
- (3) 4.780
- (4) 4.875

5. Mr Siva bought a crate of 90 apples. $\frac{3}{5}$ of them are red. How many apples are red?

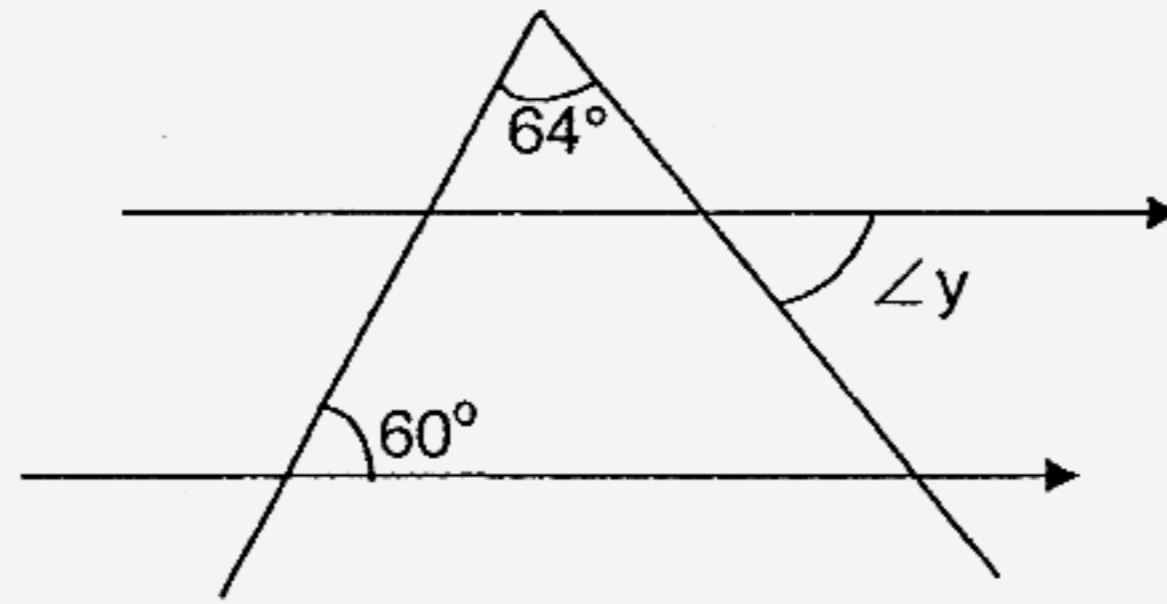
- (1) 26
- (2) 36
- (3) 44
- (4) 54

6. The figure below not drawn to scale is made up of a rectangle and a triangle. Find its area.



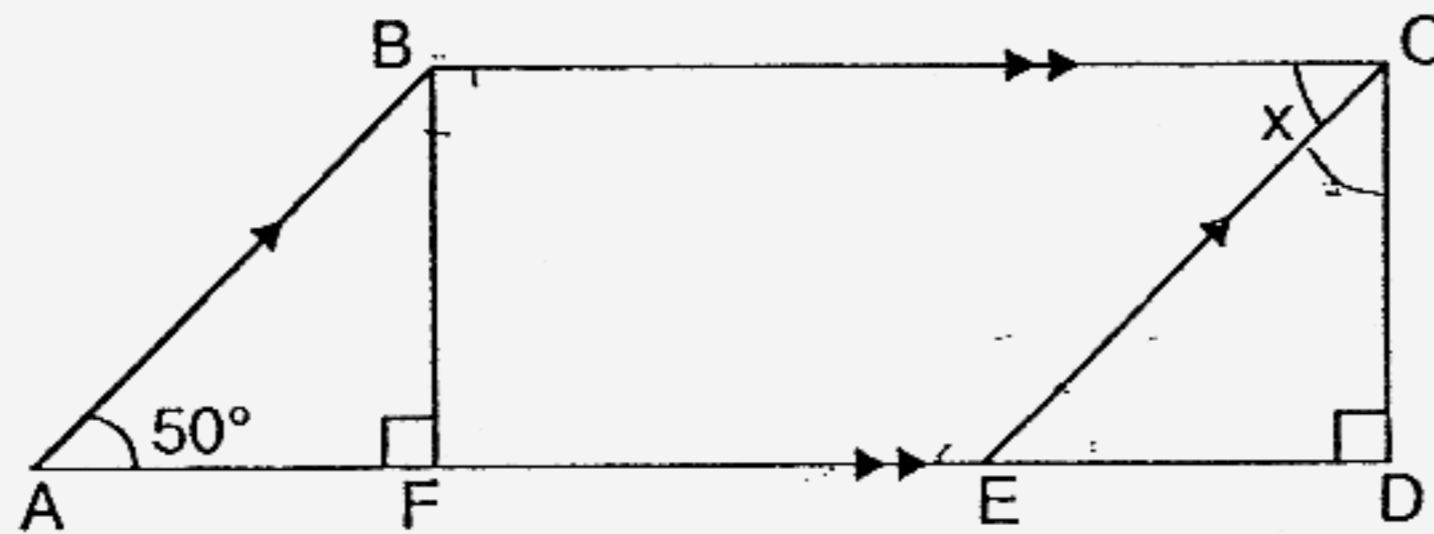
- (1) 86 cm^2
- (2) 92 cm^2
- (3) 95 cm^2
- (4) 104 cm^2

7. The figure below is not drawn to scale. Find the value of $\angle y$.



- (1) 54°
- (2) 56°
- (3) 60°
- (4) 64°

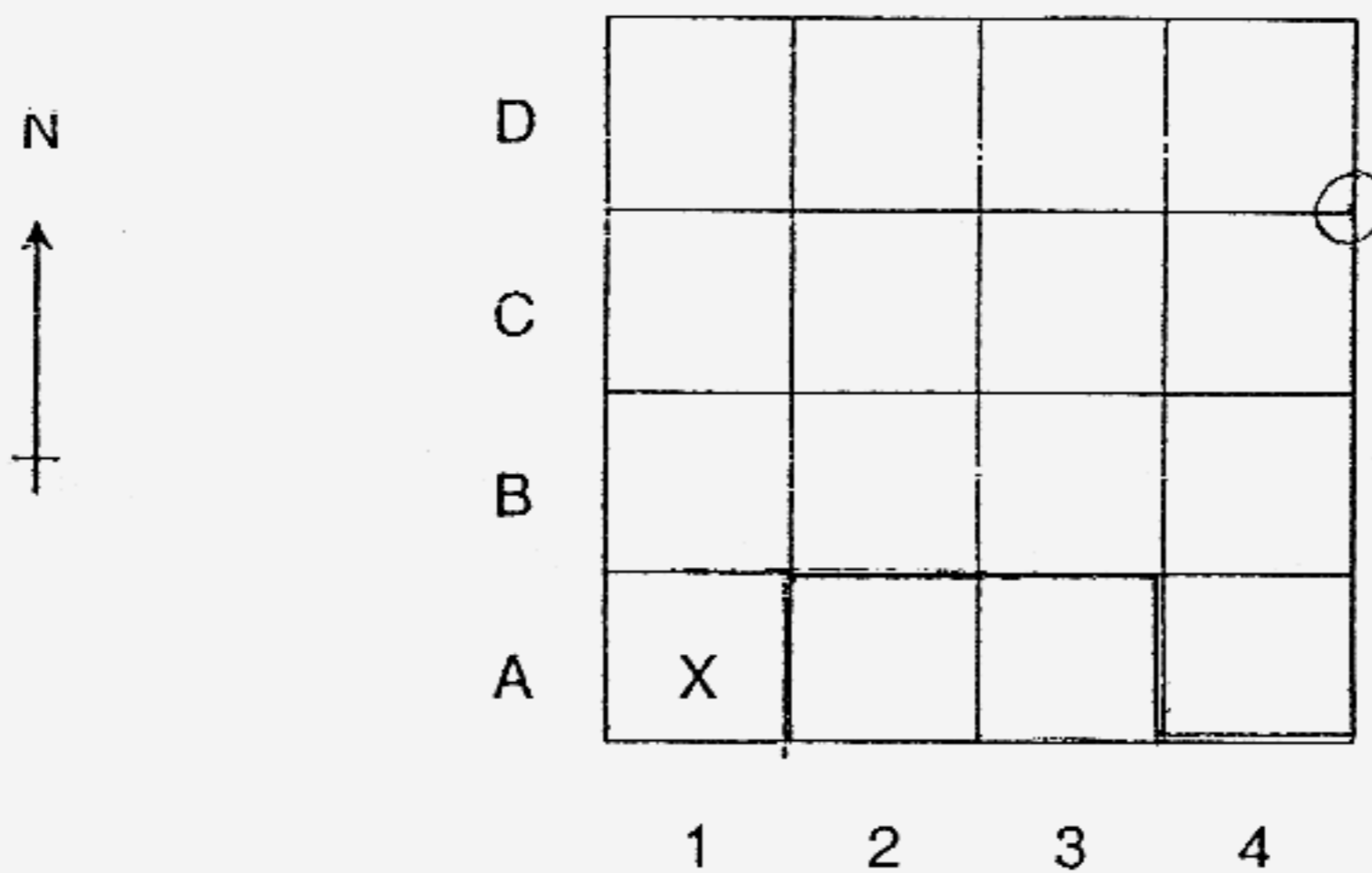
8. The figure below is not drawn to scale. $\triangle ABF$ and $\triangle ECD$ are identical. Find $\angle x$.



- (1) 30°
- (2) 40°
- (3) 45°
- (4) 50°

9. Miss Tiang is on a treasure hunt. Below are the following steps that she needs to follow to reach the treasure.
- 1) She starts at point X.
 - 2) She moves one square north from her starting point.
 - 3) She then turns 90° clockwise and moves two squares.
 - 4) She turns 90° clockwise and moves one square south.
 - 5) She turns left and move 1 step forward.
 - 6) She turns 90° anticlockwise and moves three spaces north.

Where is the treasure?

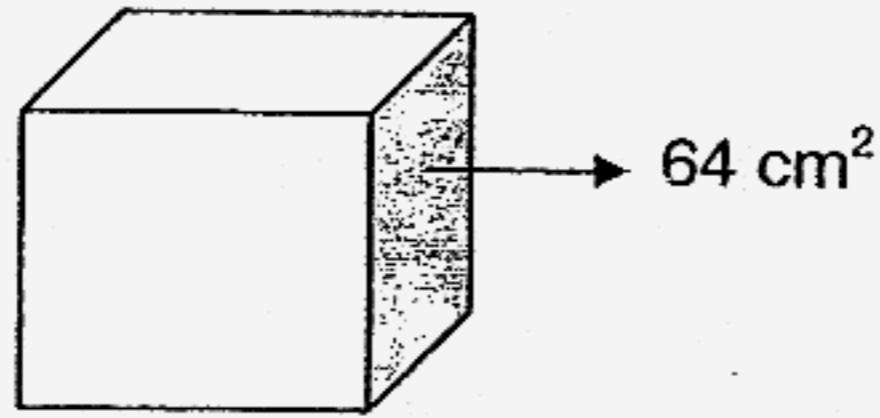


- (1) B3
- (2) C4
- (3) D4
- (4) A3

10. If Raymond saves 40 cents daily and his brother saves $\frac{1}{2}$ of his amount in a day, how long will it take for the both of them to save \$12.00?

- (1) 20 days
- (2) 24 days
- (3) 30 days
- (4) 60 days

11. The area of one face of a cube is 64 cm^2 . Find its volume.



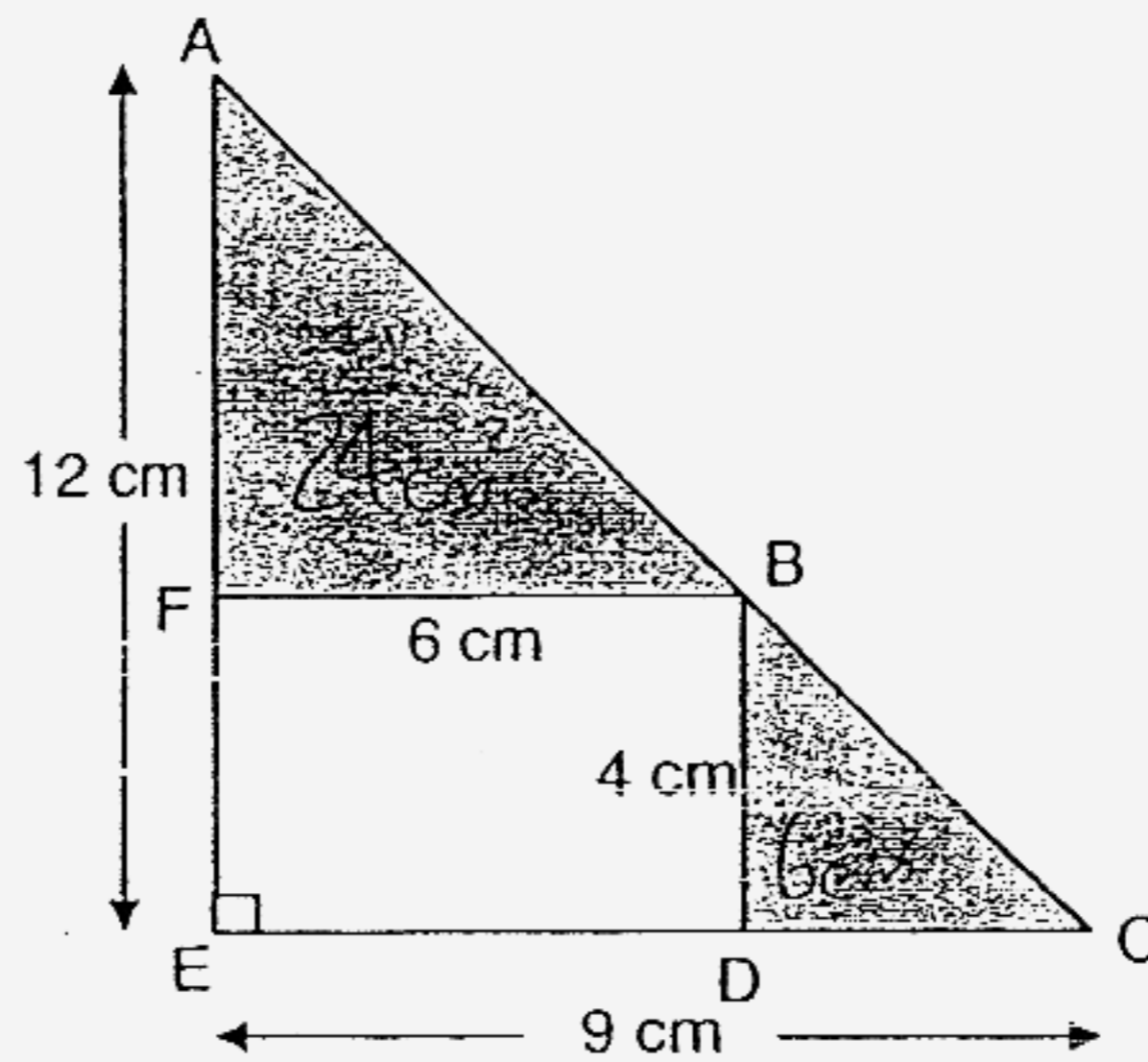
- (1) 216 cm^3
(2) 343 cm^3
(3) 512 cm^3
(4) 729 cm^3
12. In 2005, Mr Charles earned \$1 800 monthly. In 2006, his monthly salary increased by 20%. What is his monthly salary in 2006?

- (1) \$1 350
(2) \$1 440
(3) \$2 160
(4) \$3 600

- 4
16
13. 8 bottles of water can fill 32 glasses of water. On Children's Day, Mr Tay bought 36 bottles for his class party. How many glasses of water did his pupils drink?

- (1) 128
(2) 144
(3) 256
(4) 288

14. Look at the figure below (not drawn to scale).
Find the area of the shaded region.



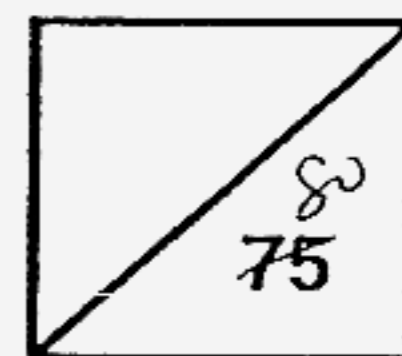
- (1) 30 cm^2
(2) 36 cm^2
(3) 60 cm^2
(4) 84 cm^2
15. In a class of 35 pupils, $\frac{3}{5}$ of them are boys. In term two, 3 boys joined the class while 2 girls transferred out. What fraction of the class are boys?
- (1) $\frac{1}{2}$
(2) $\frac{1}{3}$
(3) $\frac{7}{12}$
(4) $\frac{2}{3}$



Rosyth School
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Primary 5

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Date: 31 October 2006

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BOOKLET B

Instructions to Pupils:

1. Do not open this booklet until you are told to do so.
2. Follow all instructions carefully.
3. This booklet consists of 2 parts, Section B and C.
4. For both Section B and C, show all relevant working in the spaces provided.
5. ANSWER ALL THE QUESTIONS.

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Section B (30 marks)

Questions 16 to 25 carry 1 mark each. Write your answers in the spaces provided. For questions which require units, give your answers in the units stated. (10 marks)

16. Express 8% as a fraction in its simplest form.

Ans: _____

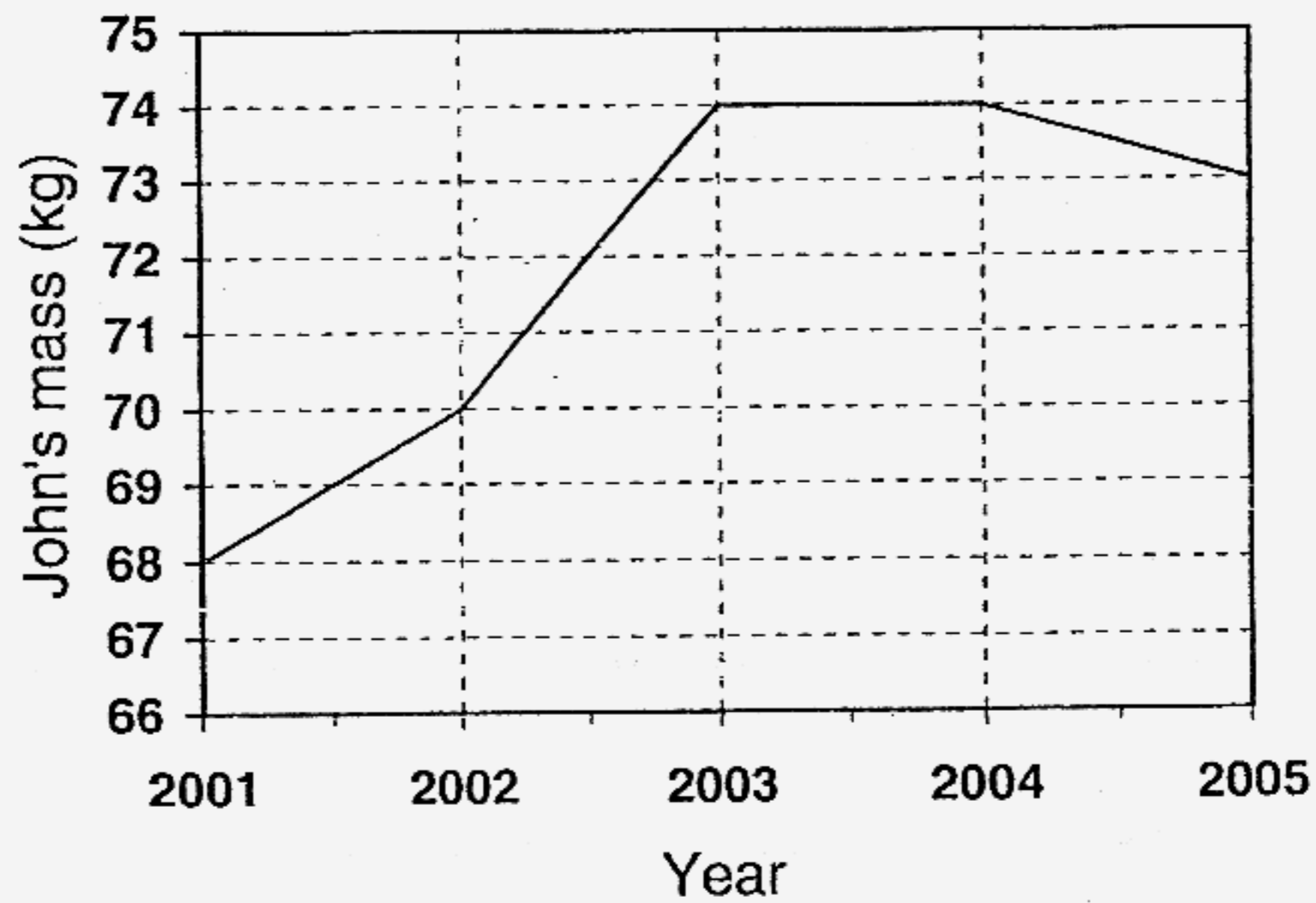
17. Mr Wong is $1\frac{1}{2}$ times as heavy as his son. If he has a mass of 72 kg, find his son's mass.

Ans: _____ kg

18. A class of 40 pupils sat for an English test. 75% of them scored 90 marks and above. Find the number of pupils who scored below 90 marks.

Ans: _____

19. The graph below shows John's mass from the beginning of 2001 to the beginning of 2005.



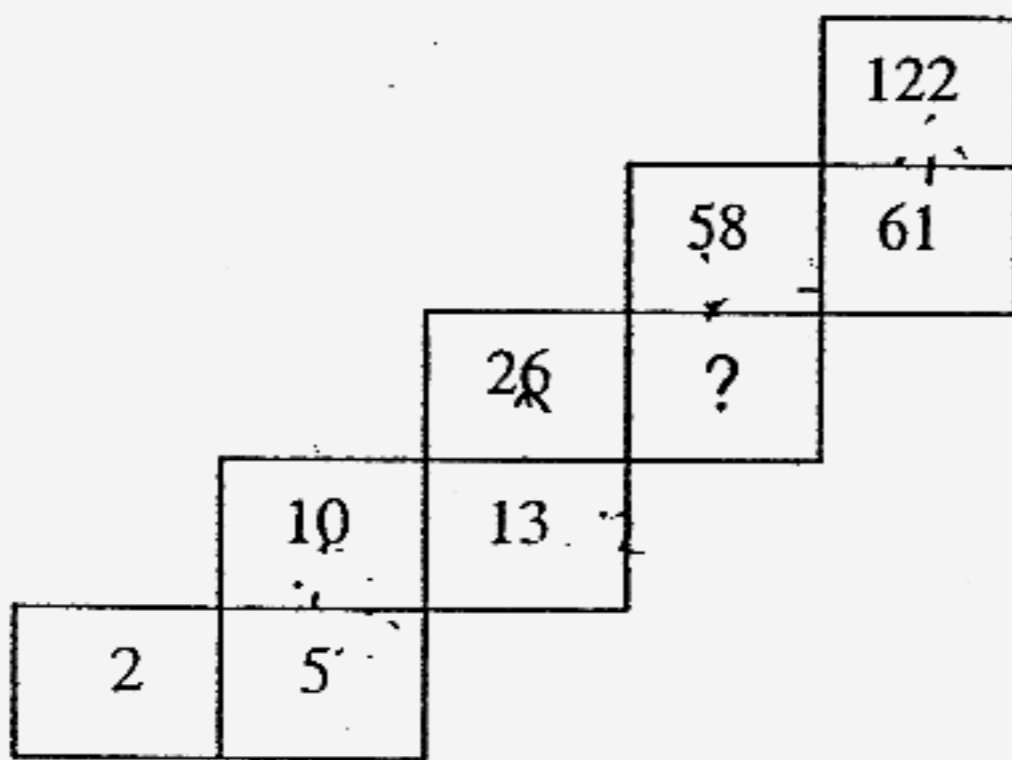
Between which 2 years did John's mass increase the most?

Ans: _____, _____

-
20. Sharmina bought a storybook at \$12. Claire bought the same book at a discount of 25%. How much did she pay for the book?

Ans: \$ _____

21. Complete the number pattern shown below.

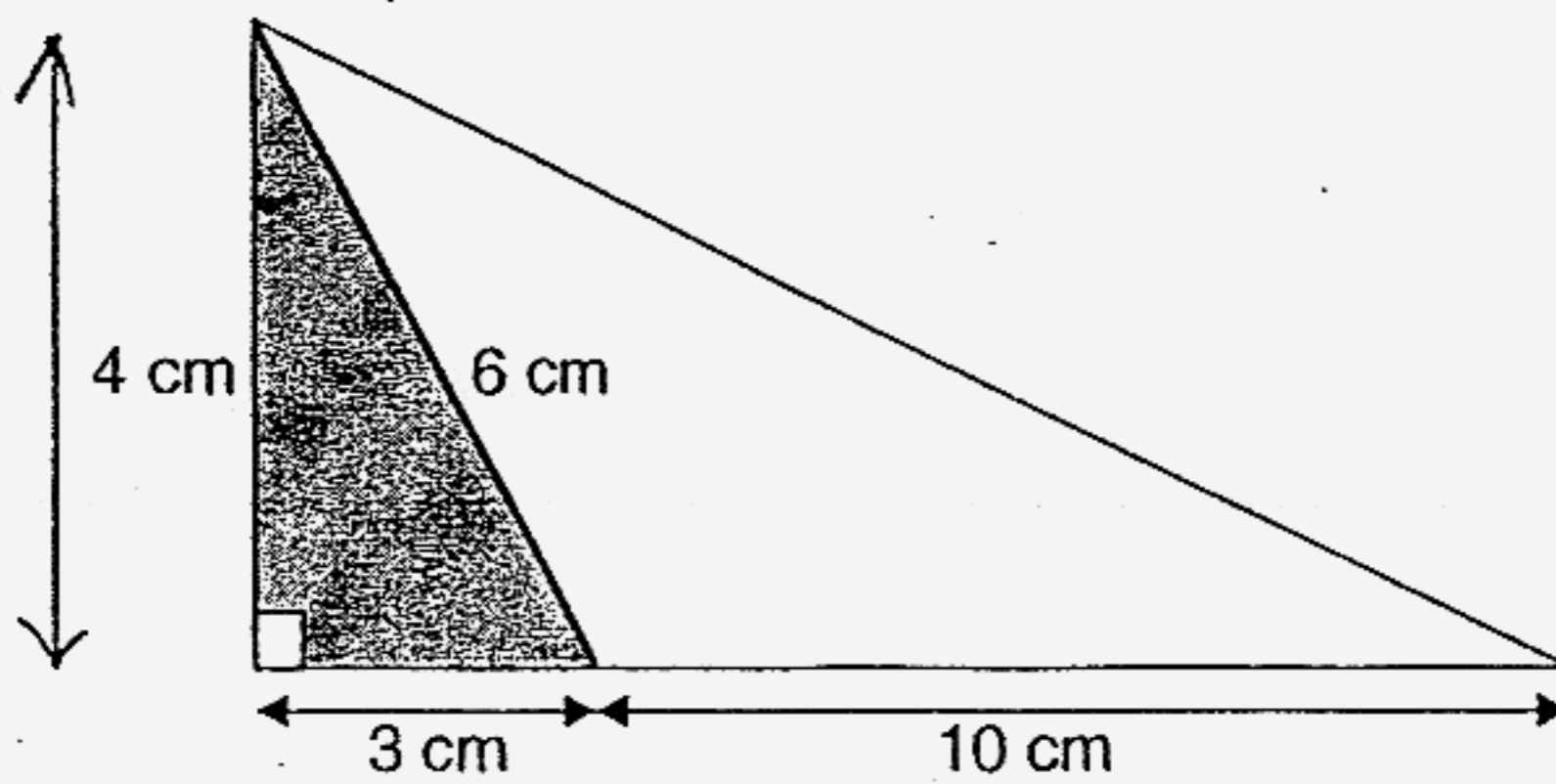


Ans: _____

22. Size Min has a string that is 38 m long. She cuts them into small pieces, each 190 cm in length. How many small pieces of string will she get?

Ans: _____

23. Look at the figure below (not drawn to scale). What is the area of the unshaded region?

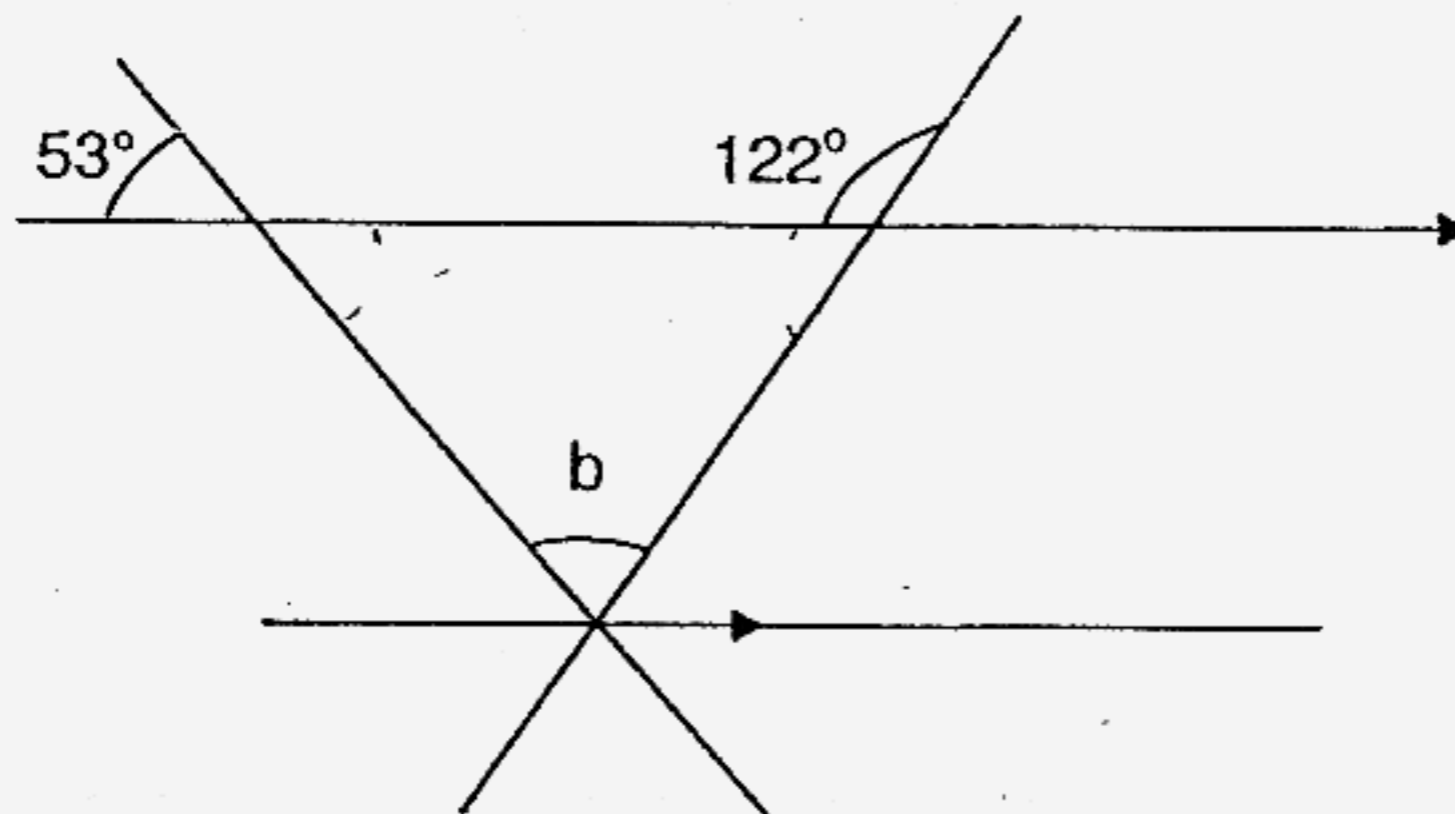


Ans: _____ cm²

24. The volume of a cube is 125 cm^3 . What is the surface area of one side of the cube?

Ans: _____ cm^2

25. The figure below is not drawn to scale. Find $\angle b$.



Ans: _____ $^\circ$

Questions 26 to 35 carry 2 marks each. Write your answers in the spaces provided. For questions which require units, give your answers in the units stated. (20 marks)

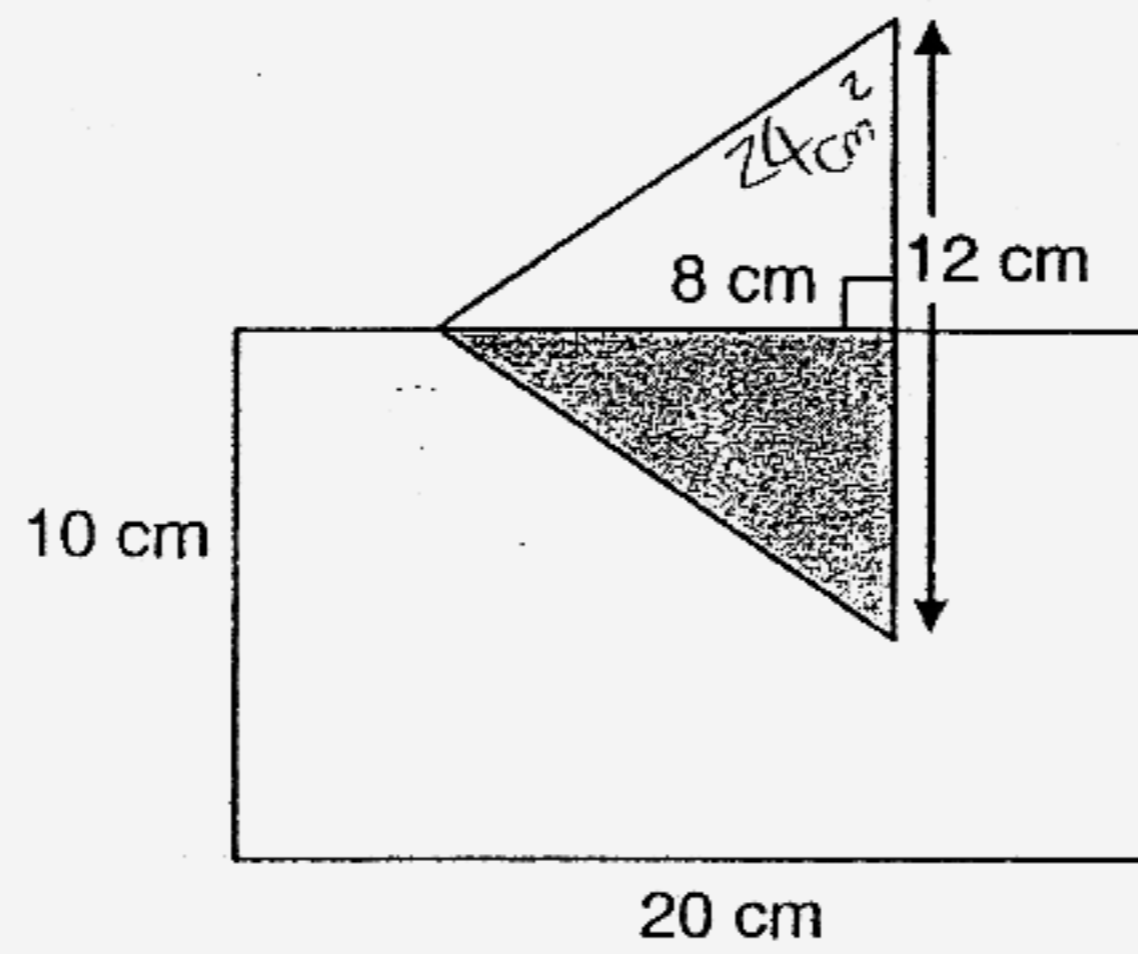
26. 4 mangoes and 5 apples cost \$4.70. 1 mango and 2 apples cost \$1.40. Find the total cost of 1 apple.

Ans: \$ _____

27. A sum of money was shared between Hady, Taufik and Jonathan in the ratio 3 : 5 : 7. If Jonathan got \$38 more than Taufik, what was the total amount of money that was shared among the 3 of them?

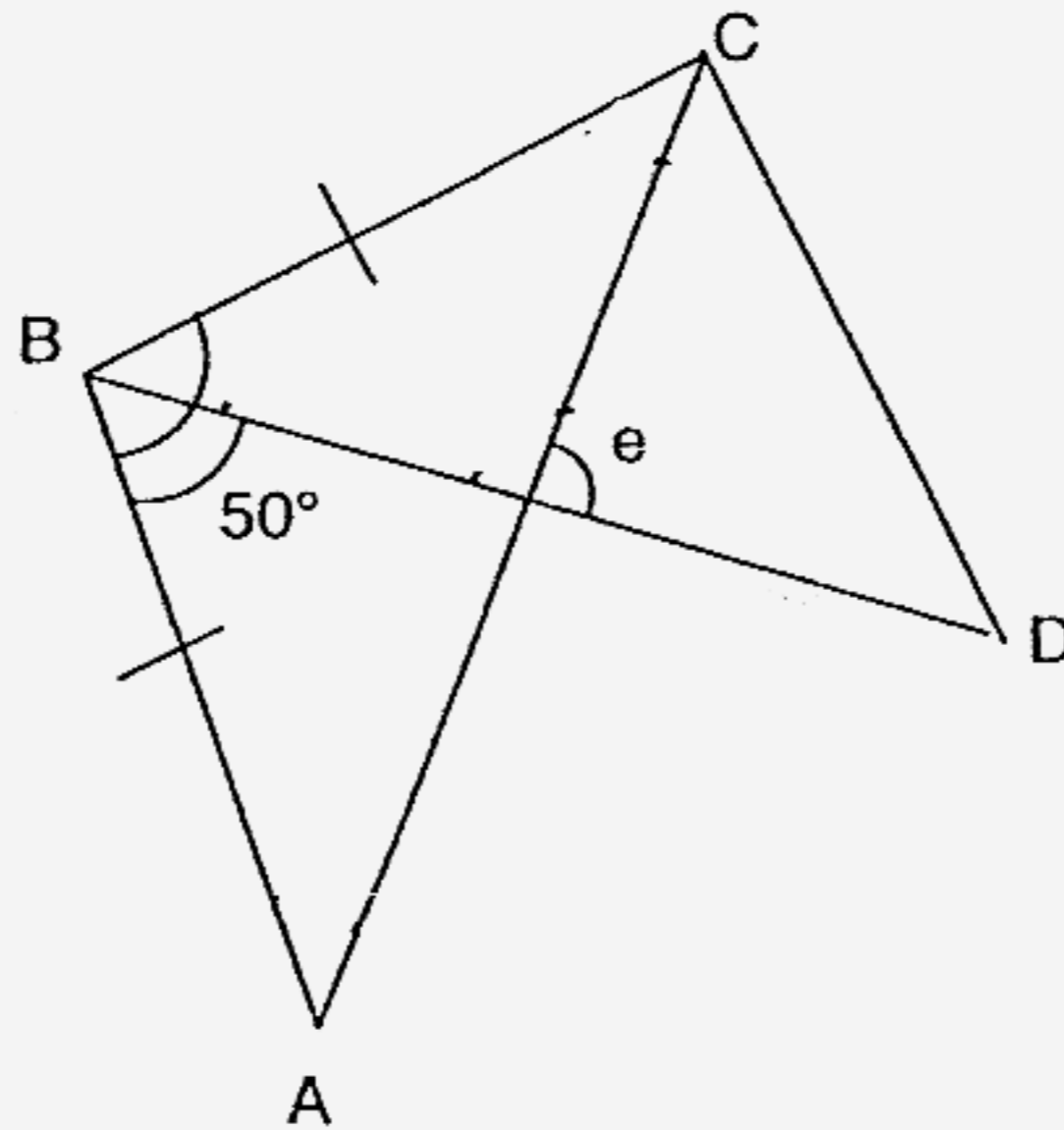
Ans: \$ _____

28. A rectangle overlaps $\frac{1}{2}$ of a triangle as shown in the diagram below. What fraction of the figure is shaded? (The diagram is not drawn to scale)



Ans: _____

29. In the figure below, not drawn to scale, AB is equal to BC. $\angle ABC$ is 98° . Find $\angle e$.



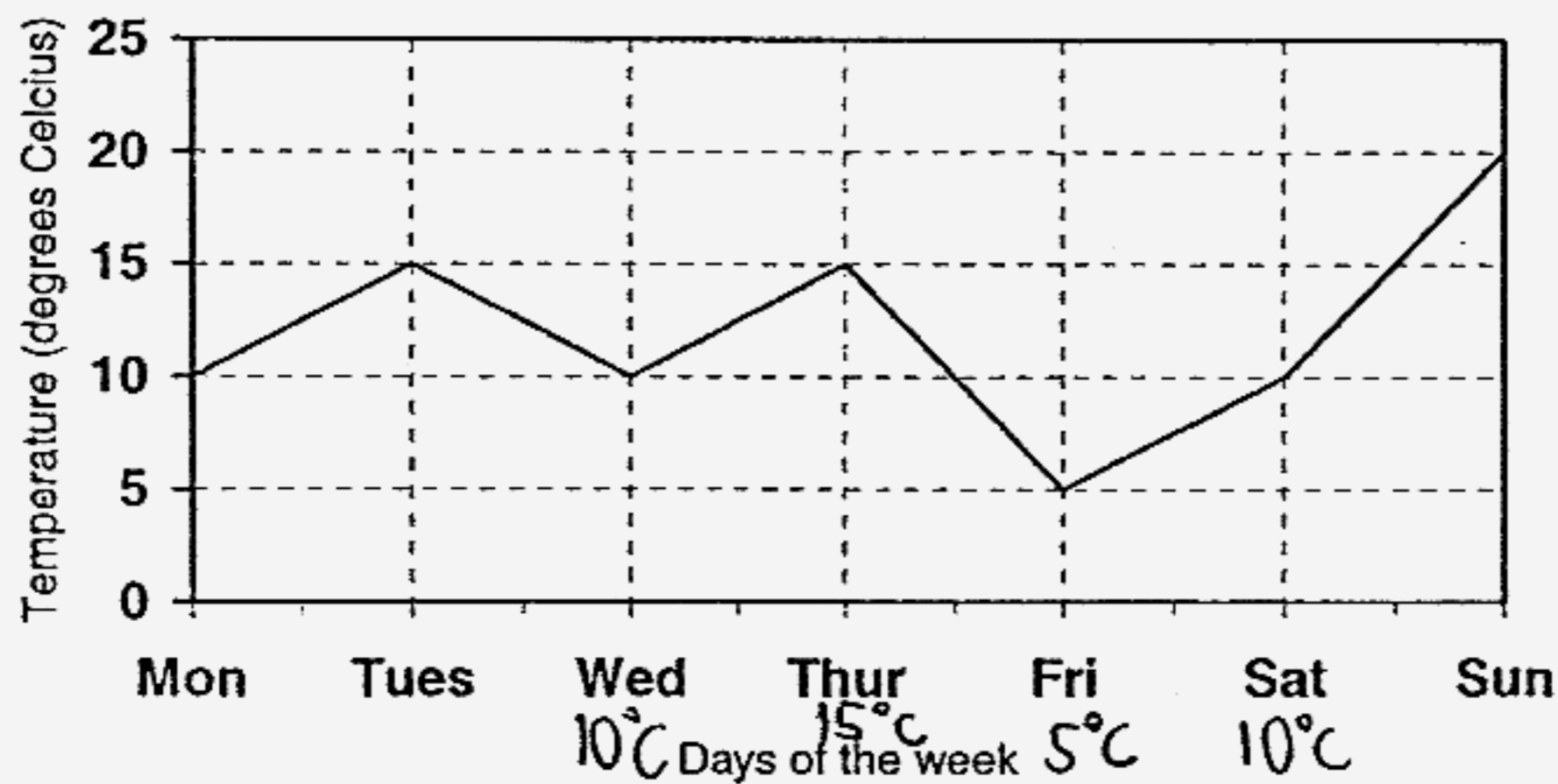
Ans: _____^o

30. During a Science experiment, John measured the length of 3 pieces of copper bars X, Y and Z. He then calculated the average length of the three copper bars. However, he had forgotten to record the length of bar Z. What is the length of bar Z?

Copper Bar	Length (m)
X	1.49
Y	2.69
Z	?
Average length	1.97

Ans: _____ m

31. The line graph below shows the daily temperature reading in Manchester.



What is the average temperature for the whole week?
(Round off your answer to 1 decimal place)

Ans: _____ °C

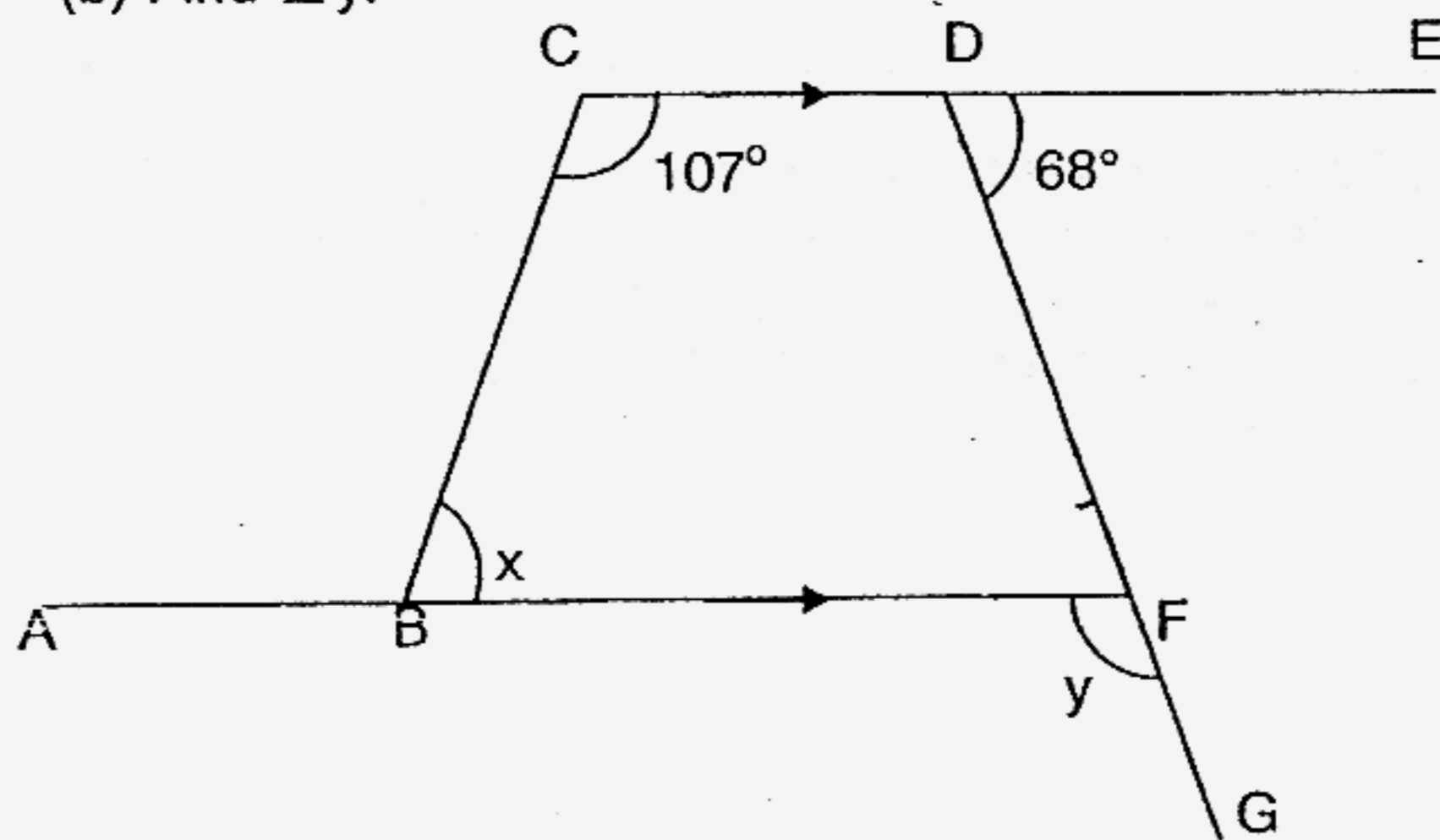
32. Judy withdrew some of her savings from the bank. She spent $\frac{2}{5}$ of it on a jacket which cost \$70. How much did she withdraw from the bank?

Ans: \$ _____

33. Janet, Gerard and Rachelle paid \$124 each for renting a chalet for 4 days. How much was the rental of the chalet each day?

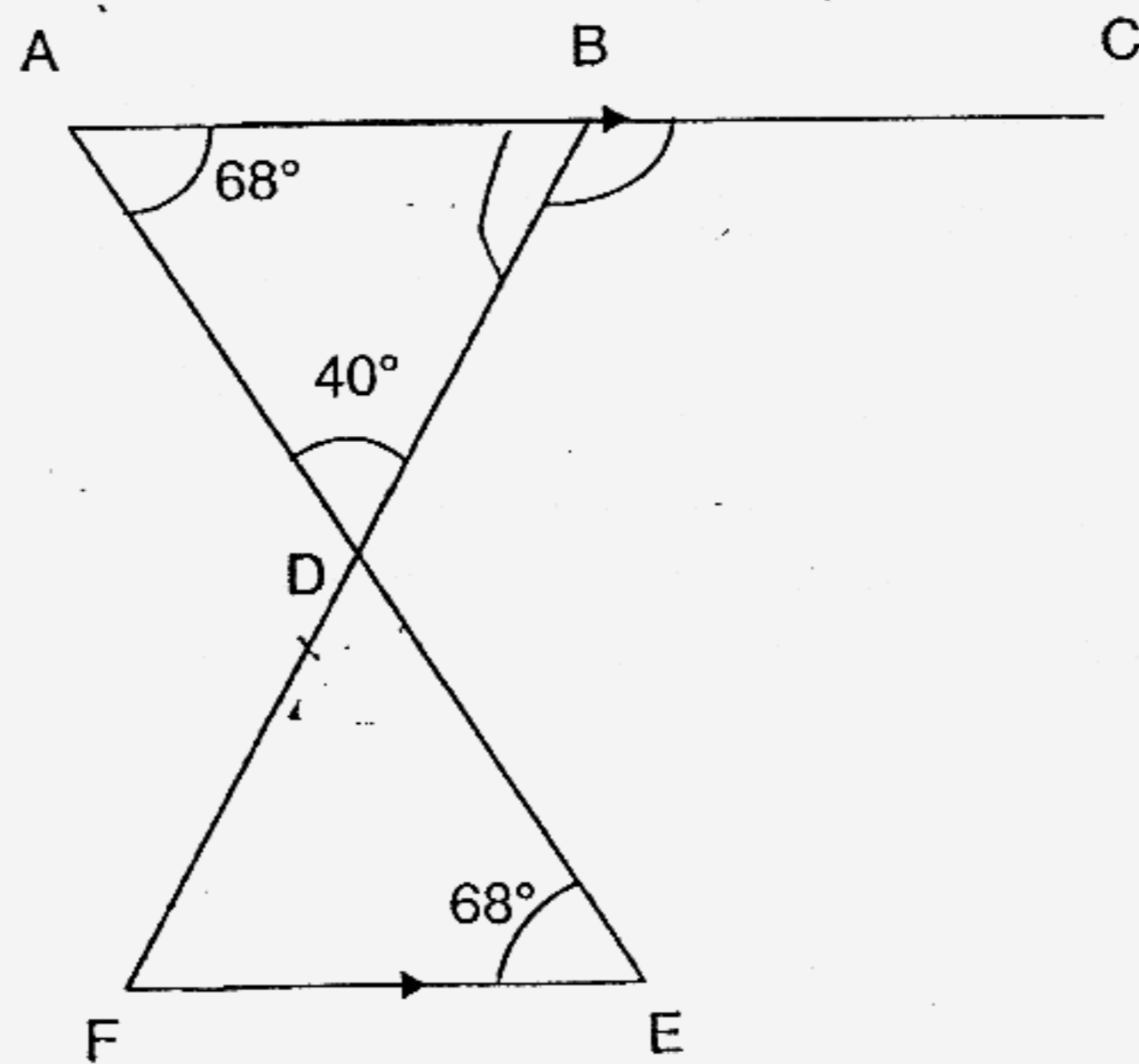
Ans: \$ _____

34. In the figure below, not drawn to scale, BCDF is a trapezium. CDE, ABF and DFG are straight lines. (a) Find $\angle x$. (b) Find $\angle y$.



Ans: (a) _____°
(b) _____°

35. In the figure below, not drawn to scale, ABC, BDF and ADE are straight lines and ABC is parallel to FE. (a) Find $\angle DFE$. (b) Find $\angle DBC$.



Ans: (a) _____°
(b) _____°

Section C (50 marks)

For questions 36 to 48, show your working clearly in the space below each question and write your answers in the spaces provided.

The number of marks available is shown in brackets () at the end of each question or part-question

36. There are 897 456 books in a library. 580 113 of them are English books, 147 985 of them are Chinese books and the rest are Malay books.
- (a) How many Malay books are there in the library?
- (b) How many more books must be added to the library to make the total number of books one million?

Ans : (a) _____ (2m)

(b) _____ (1m)

37. The table below shows the car park rates of an office building.

Duration of parking	Rates
<u>Weekdays:</u> First hour	\$1.60
Every additional $\frac{1}{2}$ hour or less	\$1.00
<u>Weekends:</u> Per entry	\$2.50

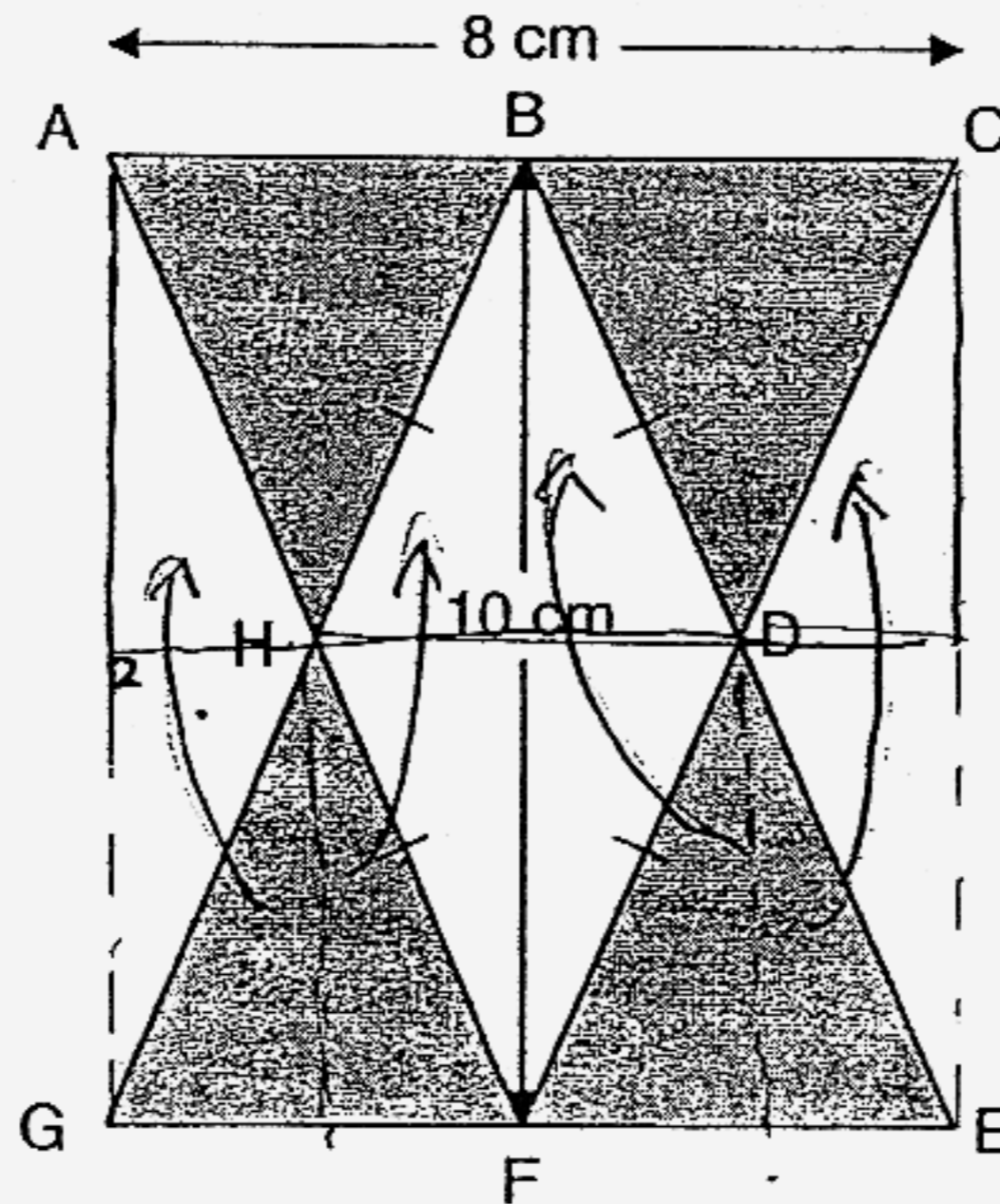
Mr Wee drives to work from Monday to Friday and parks his car in the office building car park from 9am to 3.10pm. On Saturday, he parks his car at the same car park from 9am to 12pm. How much car park charges does he pay in a week?

Ans : _____ (3m)

38. A thin wire 24 cm long is bent to form a rectangle whose length is twice its breadth. What is the ratio of the area of the rectangle to the length of the rectangle? Express your answer in its simplest form.

Ans : _____ (3m)

39. The figure below is not drawn to scale. ACF and GBE are identical triangles. BDFH is a rhombus. Find the area of the shaded region.



Ans : _____ (3m)

40. Mrs Lim bought 30 T-shirts and 42 pairs of shorts. The average cost of each T-shirt was \$19. If she spent \$1158 on the clothes, what was the average cost of each pair of shorts?

Ans : _____ (3m)

41. A rectangular tank measuring 80 cm long and 60 cm wide is half-filled with water. If the volume of water in the tank is 120 000 cm³, what is the height of the tank?

Ans : _____ (3m)

42. Joyce and Kathy had 296 buttons altogether. When Joyce used 32 of her buttons and Kathy used $\frac{3}{7}$ of her buttons, they had the same number of buttons left.

- (a) How many buttons did Kathy have at first?
- (b) What percentage of her buttons did Joyce use?

Ans : (a) _____ (2m)

(b) _____ (2m)

43. $\frac{2}{7}$ of Billy's money is equal to $\frac{1}{5}$ of Calvin's money. The difference between Billy's money and Calvin's money is $\frac{1}{3}$ of David's money. David has \$180.
- (a) What is the difference between Billy's money and Calvin's money?
(b) How much money do the 3 boys have altogether?

Ans : (a) _____ (2m)

(b) _____ (2m)

44. Rachel and Sally had a total of 130 stamps. Rachel had 10 more stamps than Sally. The ratio of Sally's stamps to that of Tabitha's stamps was 4 : 5. What is the ratio of Tabitha's stamps to Sally's stamps to Rachel's stamps?

Ans : _____ (4m)

45. Megan has 3 times as many 20-cent coins as she has 10-cent coins. She also has 3 times as many 50-cent coins as 20-cent coins. She has 260 coins altogether.
- (a) How many 50-cent coins are there?
 - (b) What is the total value of the 20-cent coins?

Ans : (a) _____ (2m)

(b) _____ (3m)

46. Terry saves 80% as much as Guifen, Bala saves 30% ^{of} as much as Terry. Guifen uses 16% of her savings to buy 8 similar T-shirts. Each T-shirt costs \$4. How much does Bala save?

Ans : _____ (5m)

47. Mr Lim had a sum of money. After using 16% of it to purchase a watch and 60% of the remainder to purchase a television, he had \$504 left. How much money did he have at first?

Ans : _____ (5m)

48. John mixed some red and blue paint in the ratio of 5 : 2 to paint an area of 10 m^2 . He used half of a 1-litre can of red paint and some blue paint from a can of the same size. How many cans of paint would he need to open to paint a room measuring 6 m by 5 m?

Ans : _____ (5m)

End of paper

Please check your work carefully.

Rosyth Primary School

Answer Sheets

Q1	Q2	Q3	Q4	Q5
4	1	1	4	4
Q6	Q7	Q8	Q9	Q10
2	2	4	3	1
Q11	Q12	Q13	Q14	Q15
3	3	2	1	4

16. $\frac{8}{100} = \frac{2}{25}$

17. $72 \times \frac{2}{3} = 48\text{kg}$

18. $\frac{1}{4} \times 40 = 10$ pupils

19. Years 2002 and 2003

20. $\frac{75}{100} \times 12 = \9.00

21. 29

22. $38\text{m} = 3800\text{cm}$
 $3800 \div 190 = 20\text{cm}$

23. $\frac{1}{2} \times 10 \times 4 = 20\text{cm}^2$

24. $125 = 5 \times 5 \times 5$
 $5 \times 5 = 25\text{cm}^2$

25. $180^\circ - 122^\circ = 58^\circ$
 $\angle b = 180^\circ - (58^\circ + 53^\circ)$
 $= 69^\circ$

26. $4m + 5a = \$4.70$
 $1m + 2a = \$1.40$
 $4m + 8a = \$5.60$
 $3a = \$5.60 - \4.70
 $= 0.90$
 $1 \text{ apple} = 0.90 \div 3 = 0.30\text{¢}$

27. H : T : J
3 : 5 : 7
 $2u = \$38$
 $15u = \$285$

$$28. \quad 10 \times 20 = 200$$

$$\frac{1}{2} \times 6 \times 4 = 24$$

$$\frac{24}{224} = \frac{3}{28}$$

$$29. \quad (180^\circ - 98^\circ) \div 2 = 41^\circ$$

$$\angle CB = 98^\circ - 50^\circ$$

$$= 48^\circ$$

$$180^\circ - (48^\circ + 41^\circ)$$

$$= 91^\circ$$

$$\angle e = 180^\circ - 91^\circ$$

$$= 89^\circ$$

$$30. \quad 1.97 \times 3 = 5.91$$

$$5.91 - (1.49 + 2.69)$$

$$5.91 - 4.18 = 1.73$$

$$31. \quad 85 \div 7 = 12.14$$

$$= 12.1^\circ\text{C}$$

$$32. \quad 2u = \$70$$

$$5u = \$175$$

$$33. \quad \$124 \times 3 = \$372$$

$$\$372 \div 4 = \$93$$

$$34a. \quad \angle DFA = 68^\circ \text{ (alt } \sphericalangle)$$

$$\angle CDF = 180^\circ - 68^\circ$$

$$= 112^\circ$$

$$35a. \quad \angle DFE = 180^\circ - (40^\circ + 68^\circ)$$

$$= 72^\circ$$

$$34b. \quad \angle x = 360^\circ - (180^\circ + 107^\circ)$$

$$= 73^\circ$$

$$\angle y = 180^\circ - 68^\circ$$

$$= 112^\circ$$

$$35b. \quad \angle ABD = 72^\circ \text{ (alt. } \sphericalangle)$$

$$\angle DBC = 180^\circ - 72^\circ$$

$$= 108^\circ$$

$$36a. \quad 897456 - (580113 + 147985) = 169358$$

There are 169358 Malay books in the library.

$$36b. \quad 10000000 - 897456 = 102544$$

102544 books must be added.

$$37. \quad \text{Week Day}$$

$$9\text{am to } 3\text{pm}$$

$$\$12.60$$

$$= \$12.60 \times 5$$

$$= \$63 + 2.50$$

$$= \$65.50$$

$$\text{Weekend}$$

$$9\text{am to } 3\text{pm}$$

$$\$2.50$$

He has to pay **\\$65.50** a week

$$\begin{aligned}
 38. \quad & 24 \div 6 = 4 \\
 & 4 \times 2 = 8 \\
 & 8 \times 4 = 32 \\
 & \quad A : L \\
 & \quad 32 : 8 \\
 & \quad 4 : 1
 \end{aligned}$$

The ratio is 4 : 1

$$39. \quad \frac{1}{2} \times 8 \times 10 = 40\text{cm}^2$$

The area of the shaded region is 40cm^2

$$\begin{aligned}
 40. \quad & 30 \times \$19 = \$570 \\
 & \$1158 - \$570 = \$588 \\
 & \$588 \div 42 = \$14
 \end{aligned}$$

The average cost is **\$14**

$$\begin{aligned}
 41. \quad & 120000\text{cm}^3 \times 2 = 240000\text{cm}^3 \\
 & 80 \times 60 = 4800\text{cm} \\
 & 240000\text{cm}^3 \div 4800\text{cm}^2 = 50\text{cm}
 \end{aligned}$$

The height is **50cm**

$$\begin{aligned}
 42a. \quad & 296 - 32 = 264 \\
 & 264 \div 11 = 24 \\
 & 24 \times 7 = 168
 \end{aligned}$$

Kathy has 168 buttons at first.

$$\begin{aligned}
 42b. \quad & 296 - 168 = 128 \\
 & = \frac{32}{128} \\
 & = \frac{1}{4} = 25\%
 \end{aligned}$$

Joyce used 25% of her buttons.

43a. $9 \div 3 = 3$
 $\$180 \div 3 = \60
The different is \$60

43b. Billy = 7u Calvin = 10u David = 9u
 $10 + 7 + 9 = 26$
 $\$60 \div 3 = \20
 $\$20 \times 26 = \520
They have \$520 altogether.

44. $130 - 10 = 120$
 $120 \div 2 = 60$

$$\begin{array}{l} S : T \\ 4 : 5 \\ 60 \div 4 = 15 \\ 15 \times 5 = 75 \\ 60 + 10 = 70 \end{array}$$

$$\begin{array}{l} T : S : R \\ 75 : 60 : 70 \\ 15 : 12 : 14 \end{array}$$

The ratio is 15 : 12 : 14

45a, $260 \div 13 = 20$
 $20 \times 9 = 180$
There are 180 50¢ coins

45b. $20 \times 3 = 60$
There are 60 coins for 0.20¢
 $0.20 \times 60 = 1200¢$
 $= \$12.00$
The total value is \$12.00

$$\begin{aligned}
 46. \quad & \$4 \times 50 = \$200 \\
 & \$200 \div 5 = \$40 \\
 & \$40 \times 4 = \$160 \\
 & \$160 \div 10 = \$16 \\
 & \$16 \times 3 = \$48
 \end{aligned}$$

Bala saved **\$48.00**

$$\begin{aligned}
 47. \quad & 84\% \div 5 = 16.8\% \\
 & 16.8\% \times 2 = 33.6\% \\
 & \$504 \div 2 = \$252 \\
 & \$252 \times 5 = \$1260 \\
 & \$1260 \div 42 = \$30 \\
 & \$30 \times 50 = \$1500
 \end{aligned}$$

He has **\$1500** at first.

$$\begin{aligned}
 48. \quad & R : B \\
 & 5 : 2 \\
 & 6 \times 5 = 30 \\
 & \frac{1}{2} \text{ of } 1\ell \text{ of can} = 500\text{ml} \\
 & \frac{1}{5} \text{ of } 1\ell \text{ of can} = 200\text{ml} \\
 \text{Now} \quad & R : B \\
 & 15 : 6
 \end{aligned}$$

$$500\text{ml} \times 2 = 1\ell$$

$$15 - 10 = 5$$

$$5 = \frac{1}{2}$$

$$\frac{1}{2} \text{ of } 1\ell \text{ can} = 500\text{ml}$$

$$1 \text{ can} + \frac{1}{2} \text{ can} = 1\frac{1}{2} \text{ can}$$

$$\approx 2\text{cn}$$

$$200\text{ml} \times 3 = 600\text{ml}$$

$$\frac{3}{5} \text{ a } 1\ell \text{ can} = 600\text{ml}$$

$$\frac{3}{5} \text{ can} \approx 1\text{can}$$

$$2 \text{ cans} + 1 \text{ can} = 3\text{cans}$$

John would have to open **3 cans of paint.**