



Maha Bodhi School
2007 Preliminary Examination
Mathematics

Name : _____ ()

Date : 21 August 2007

Class : Pr 6 _____

Duration : 2 h 15 min

BOOKLET A

Section A (20 marks)

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 oval (1, 2, 3 or 4) on the Optical Answer Sheet.

1. Sally was supposed to meet her friend at 5 minutes to 10.

She arrived $\frac{1}{4}$ h ^{15 min} after the appointed time.

At what time did she arrive?



2. For every 2 dumplings that a new worker wraps, an experienced one can wrap 3 more. The two workers wrapped a total of 70 dumplings together one morning.

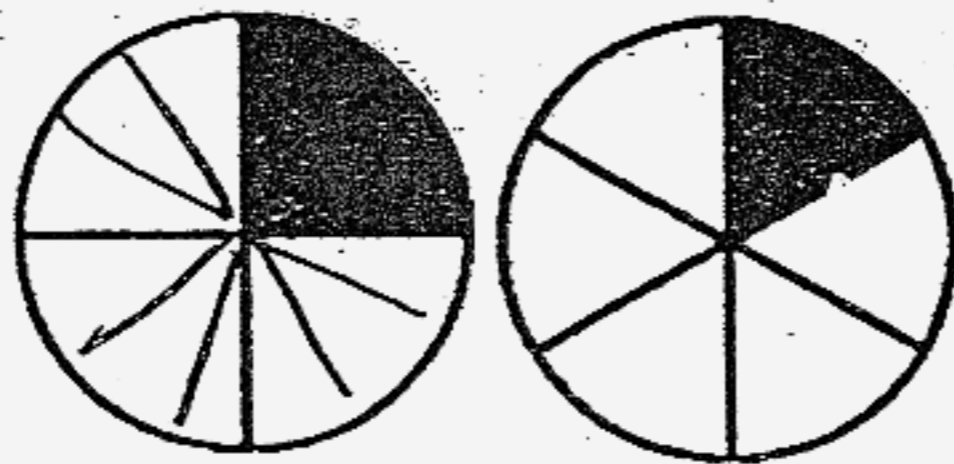
How many more dumplings were wrapped by the experienced worker?

- (1) 14
- (2) 30
- (3) 42
- (4) 50

3. Mother made two identical pizzas and cut each pizza into a different number of equal pieces.

She then gave one piece of each pizza away.

What fraction of the pizzas she had baked was given away?



(1) $\frac{1}{5}$

(2) $\frac{5}{12}$

(3) $\frac{5}{24}$

(4) $\frac{1}{6}$

4. Which one of the following has the same value as $2.16 \div 0.3$?

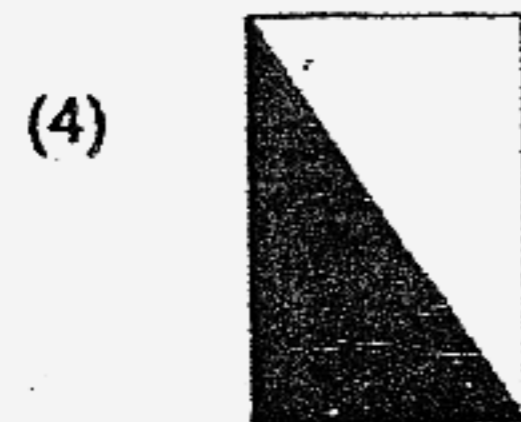
(1) $\frac{216}{3}$

(2) $\frac{21.6}{30}$

(3) $\frac{216}{30}$

(4) $\frac{216}{0.003}$

5. The rectangles shown below are identical. A part of each rectangle is then shaded. Which one of the following rectangles has the smallest fraction of it shaded?



6. There are 20 pupils in a class. There are more girls than boys in the class. Which one of the following is most probably the ratio of the number of boys to that of the girls in the class?

- (1) 1:2
 (2) 2:3
 (3) 3:4
 (4) 4:5

7. A certain number will give the same answer when rounded off to the nearest ten, hundred or thousand.

Which one of the following can be that number?

- (1) 1599
 (2) 1995
 (3) 2990
 (4) 9953

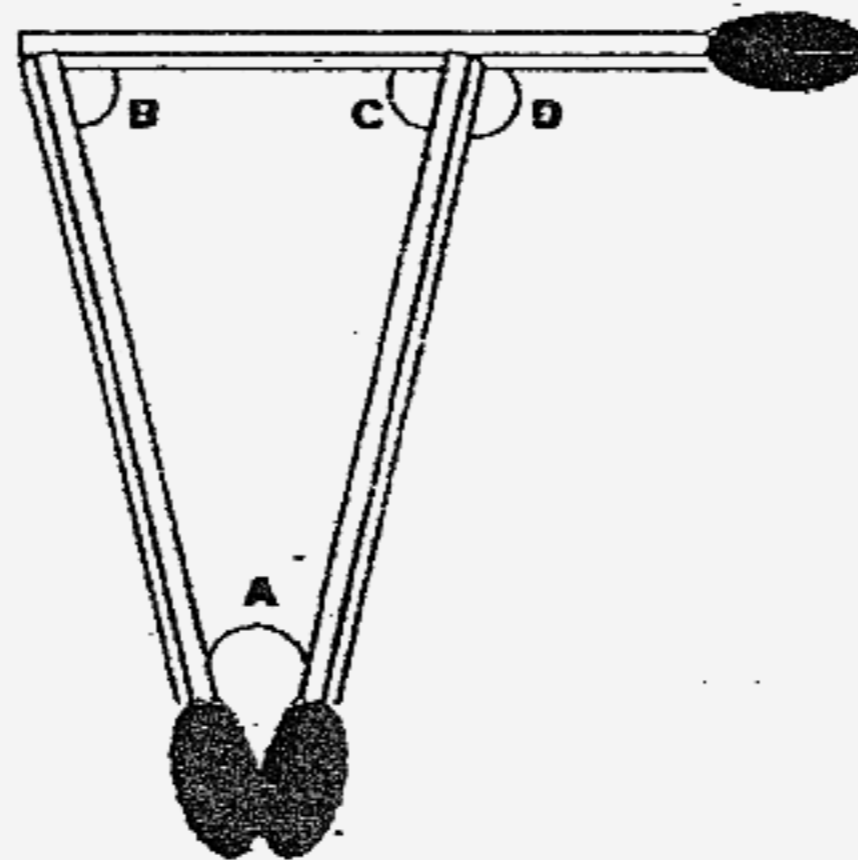
8. The table below shows the number of points four pupils had before and after Round 3 of a computer game.

Pupil	Before Round 3	After Round 3
Abdullah	100 points	50 points
Badawi	120 points	30 points
Mohamad	200 points	40 points
Mahatir	300 points	100 points

Which pupil has lost the largest percentage of his points?

- (1) Abdullah
 (2) Badawi
 (3) Mohamad
 (4) Mahatir

9. Samy took out three identical matchsticks from a matchbox and formed a triangle with them as shown in the diagram below.



Samy then made a few statements about the angles but only one of them is **definitely** correct. Which one is it?

- (1) $\angle A + \angle C = \angle B + \angle A$
 (2) $\angle B + \angle C = \angle D$
 (3) $\angle A + \angle B = \angle C + \angle D$
 (4) $\angle B + \angle C = \angle A$

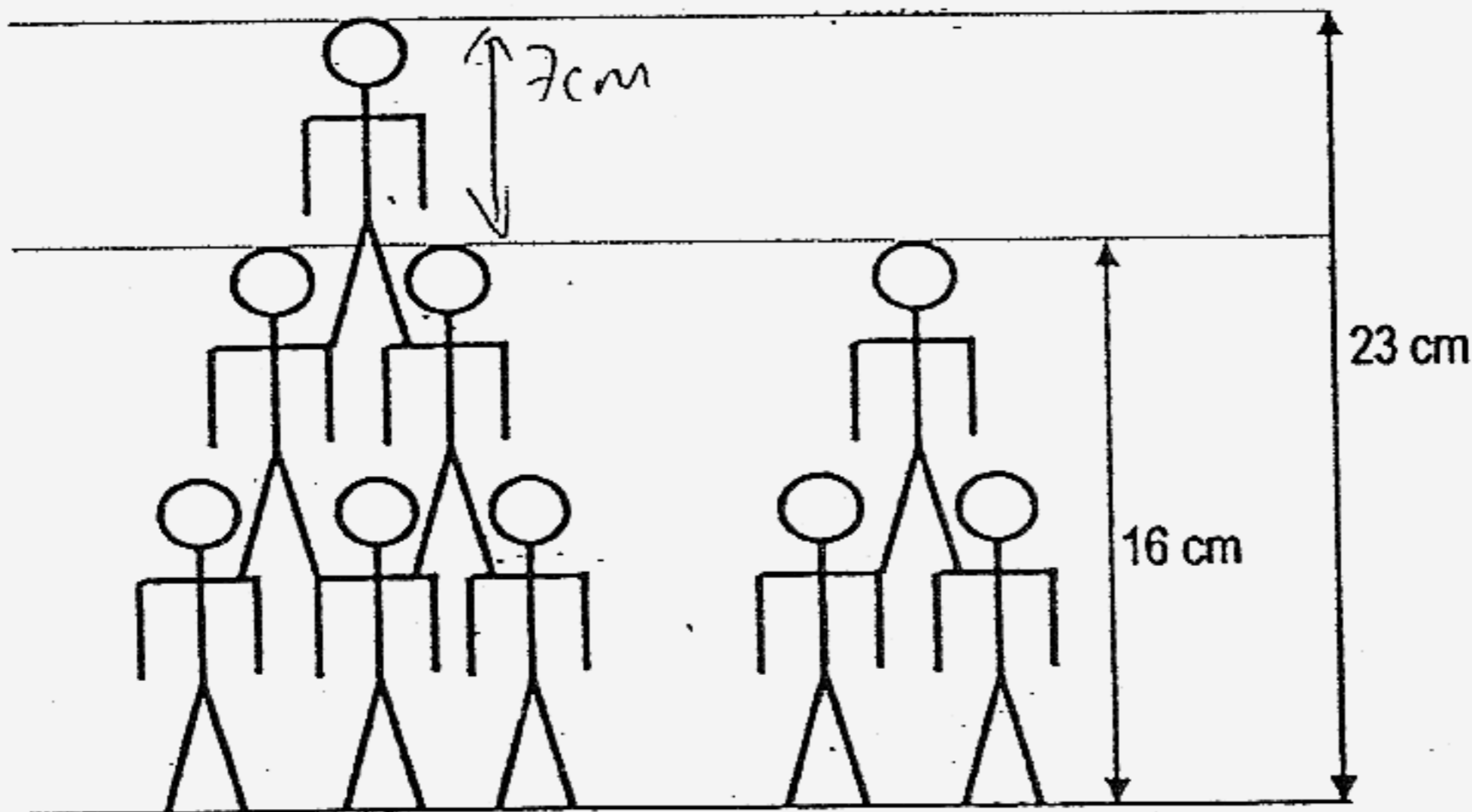
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After a game, three girls counted the number of marbles they had left and two of them made the following observations. Study the picture before answering Question 10.



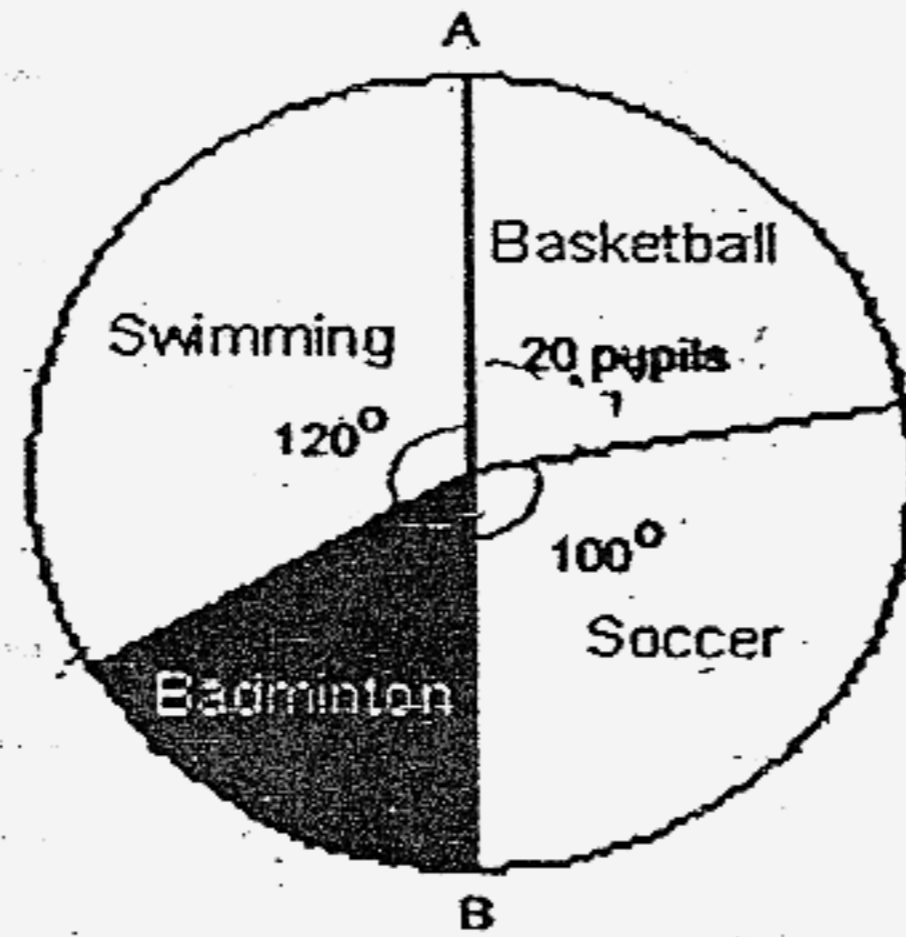
10. Which one of the following statements is not possible?
- (1) Valerie had more marbles left than Vanessa.
 - (2) Melissa had the most number of marbles left.
 - (3) Both Vanessa and Valerie had 2 marbles left.
 - (4) Valerie had 6 marbles left.

Siti wants to stack up some identical toy soldiers as shown below to form a toy pyramid. If the toys are stacked up three layers high, they will reach 23 cm. If the toys are stacked up two layers high, they will reach only 16 cm.



11. If Siti wants to stack up 10 toys in the same pattern, how high will it reach?
- (1) 28 cm
 - (2) 30 cm
 - (3) 35 cm
 - (4) 65 cm

A group of children was asked to name their favourite sports. The pie chart below shows what the pupils chose. Given that AB is a straight line and that 20 pupils picked basketball as their favourite sports, study the pie chart below carefully and answer Question 12.

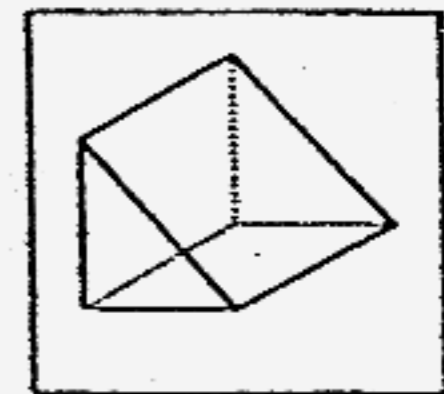


12. How many more pupils preferred soccer to badminton?

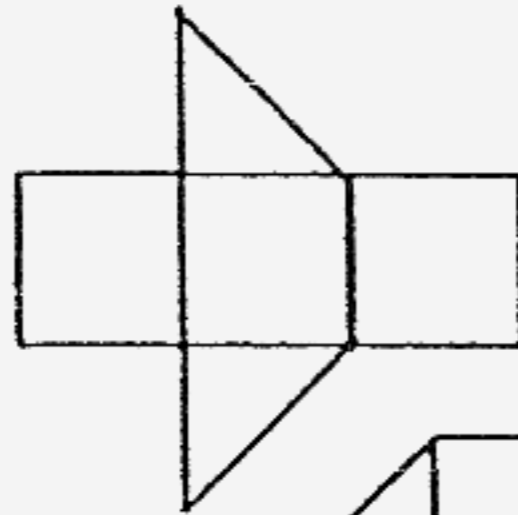
- (1) 40
- (2) 25
- (3) 15
- (4) 10

13. When two of the solid figure (shown on the right) are stacked together, a cube will be formed.

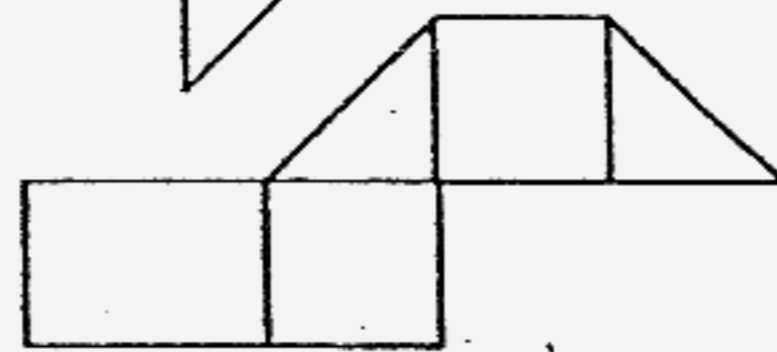
Which one of the following is the net of the solid figure?



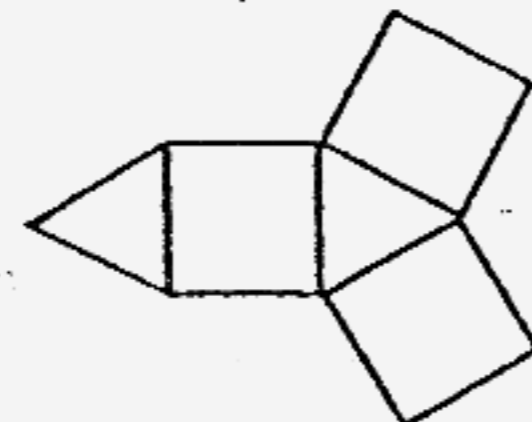
(1)



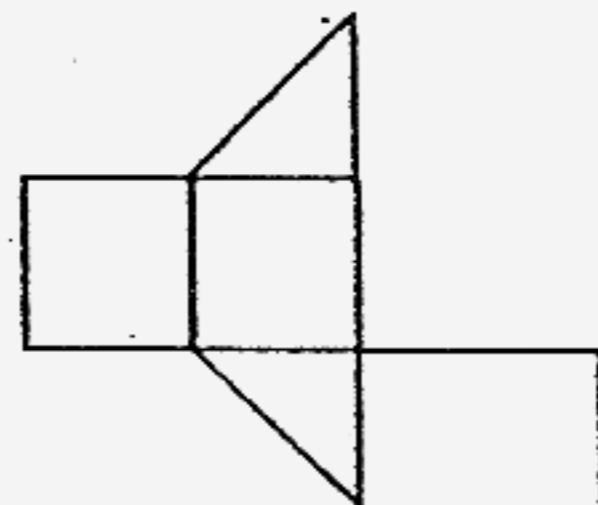
(2)



(3)

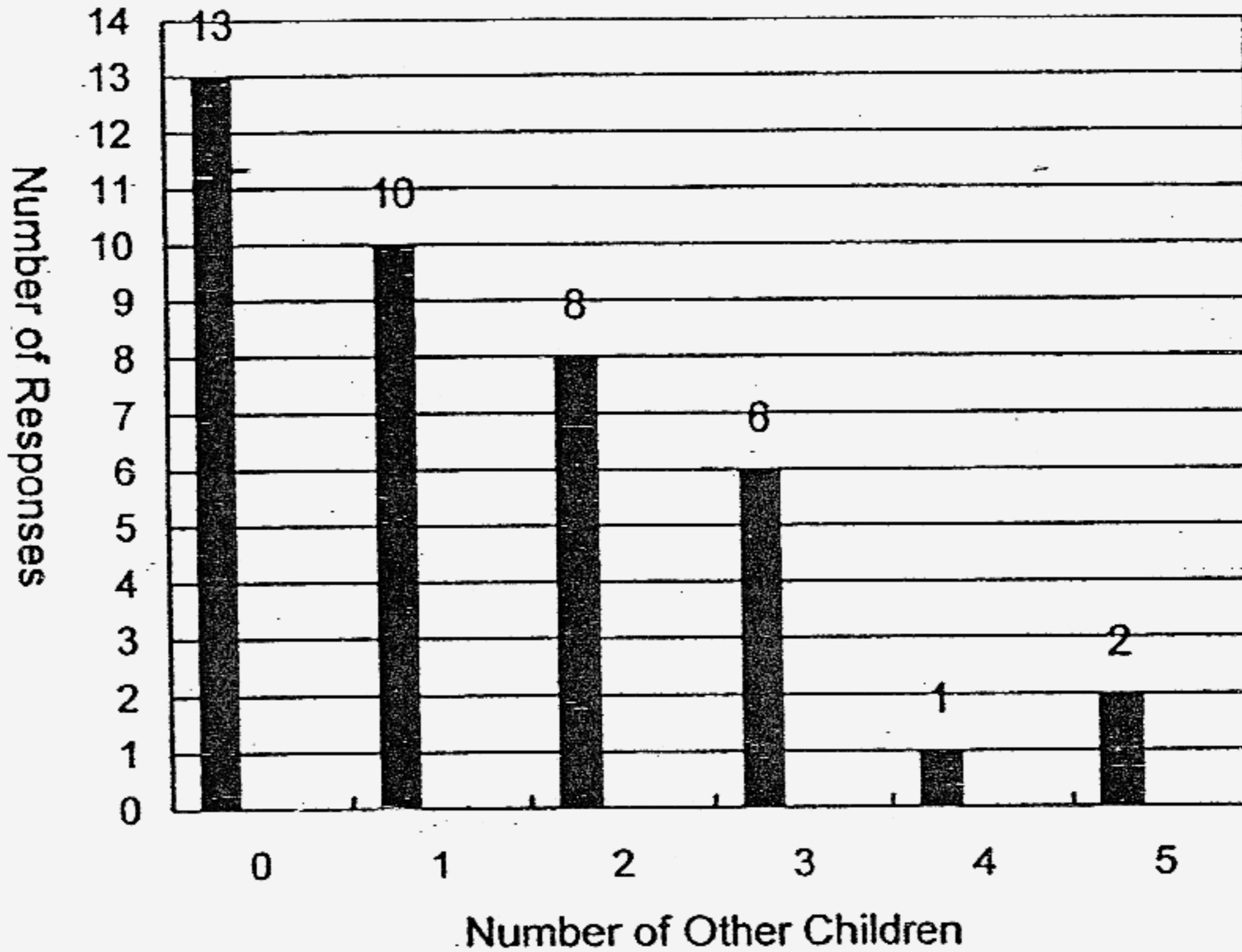


(4)



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A child from every unit in a block of flats was asked how many other children lived in the same flat. The bar graph below presents the results. Study it carefully and answer Questions 14 & 15.



14. From the survey, what is the largest number of children living in a flat?
- (1) 5
 - (2) 6
 - (3) 13
 - (4) 18
15. What is the total number of children living in that block of flats?
- (1) 40
 - (2) 58
 - (3) 85
 - (4) 98

Please proceed to Booklet B.
Please ensure that you have transferred your answers correctly onto your OAS.





Maha Bodhi School
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Mathematics

Name : _____ ()

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Parent's Signature : _____

Section A (20 marks)	
Section B (30 marks)	
Section C (50 marks)	
Total (100 marks)	

BOOKLET B

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)

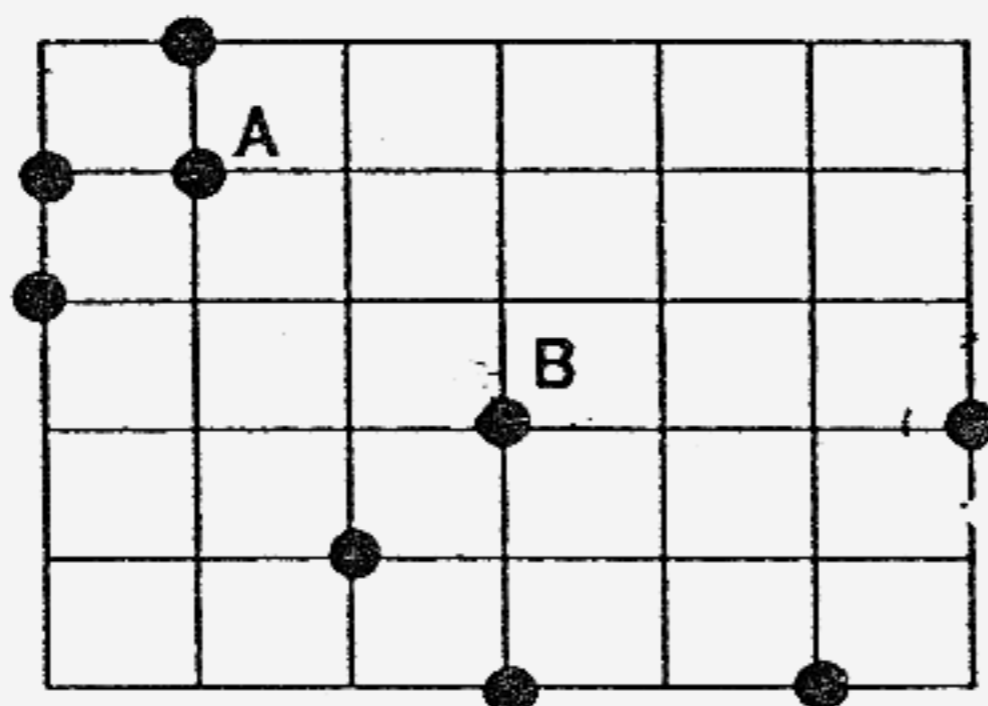
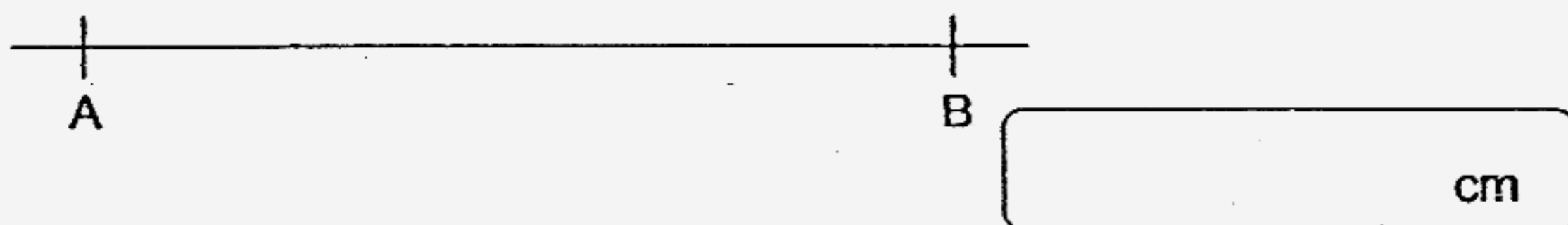
16. The multiple of 4 just before 32 is _____

17. A certain number has 9 factors.
8 of them have been listed below.
Write down the missing factor in the empty box below.

1	3	9	18	4	36	2		12
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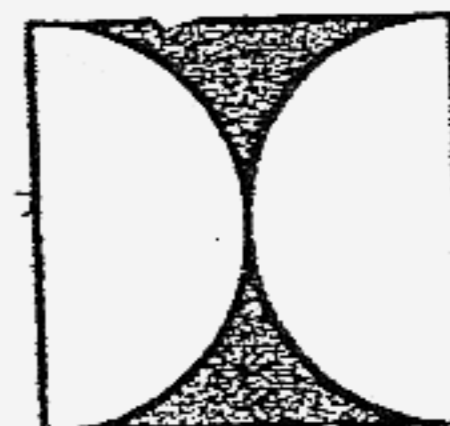
18. What do you get when you subtract 4 hundredths from the sum of 1.23 and 567.8 ?

19. With a ruler, measure and write down the length of AB.



20. Ahmad is facing Point A from Point B.
When he turns 135° in clockwise direction, he will face another point.
Circle that point in the diagram above.

21. The square shown on the right has two identical semi-circles in it. If the perimeter of the square is 80 cm, what is the total area of the shaded parts? (Take $\pi = 3.14$)


 cm²

22. Muthu has some 50¢ coins, twice as many 20¢ coins and thrice as many 5¢ coins as 50¢ coins. His 50¢ coins add up to \$2.
How much money does he have?

23. One inch is about 2.54 cm.
How many cm are there in 8 inches?
(Leave your answer to one decimal place)

 cm

24. Three 4-cm cubes are glued together to form a cuboid.
Find the volume of the cuboid.

25. Mark with an 'x' the approximate position of 13.3 in the diagram below.



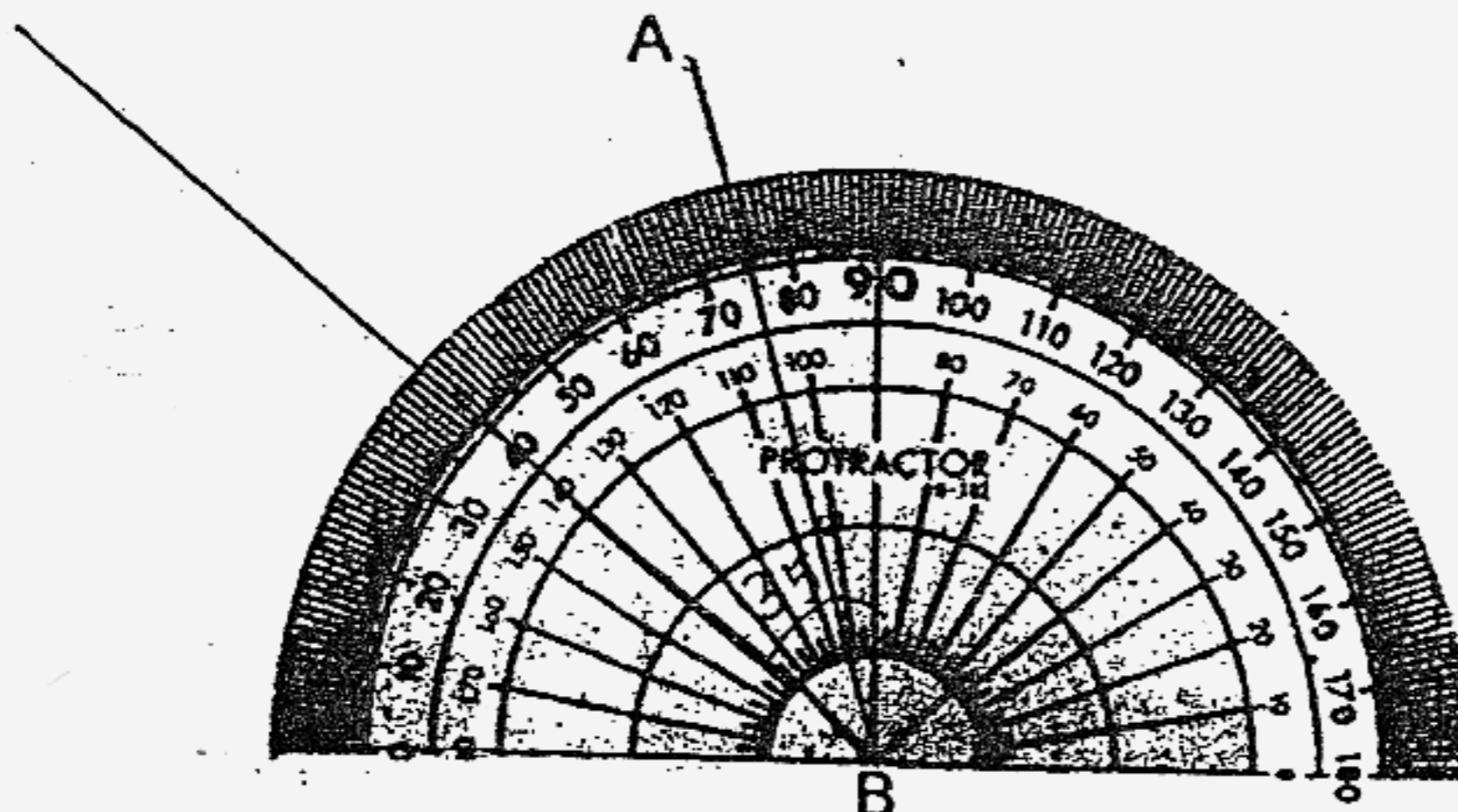
Questions 26 to 35 carry 2 marks each. Show your working clearly in the space below each question and write your answers in the spaces provided.

For questions which require units, give your answers in the units stated. (20 marks)

26. Without repeating any digit, write down the largest 3-digit number which is divisible by 5.

27. If $56 \times 78 = 4368$,
then _____ + 7.8 = 56

28. Construct the line BC in the diagram below such that $\angle ABC = 35^\circ$ and $BC = 8$ cm.

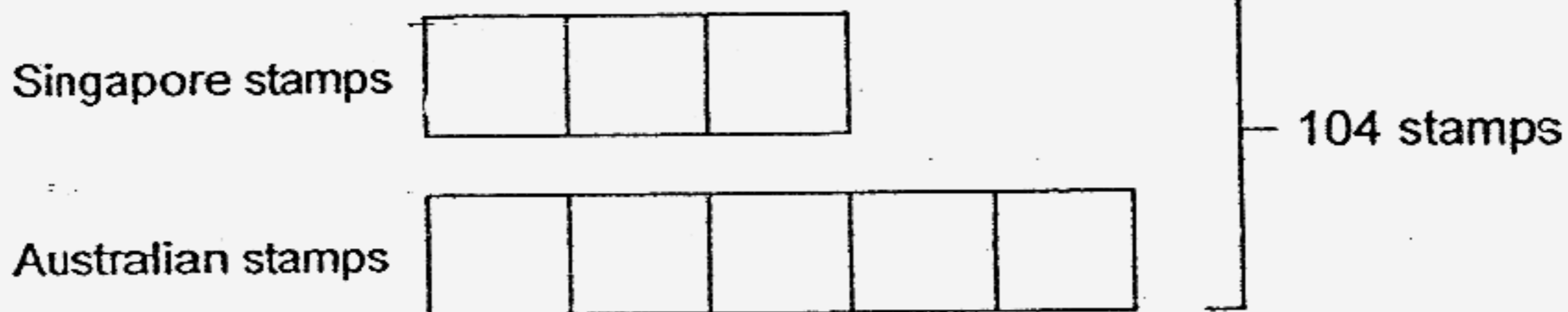


29. A bus started its journey at the time shown on the right. It took the bus 123 minutes to reach a town in Malaysia. At what time did the bus reach the town?



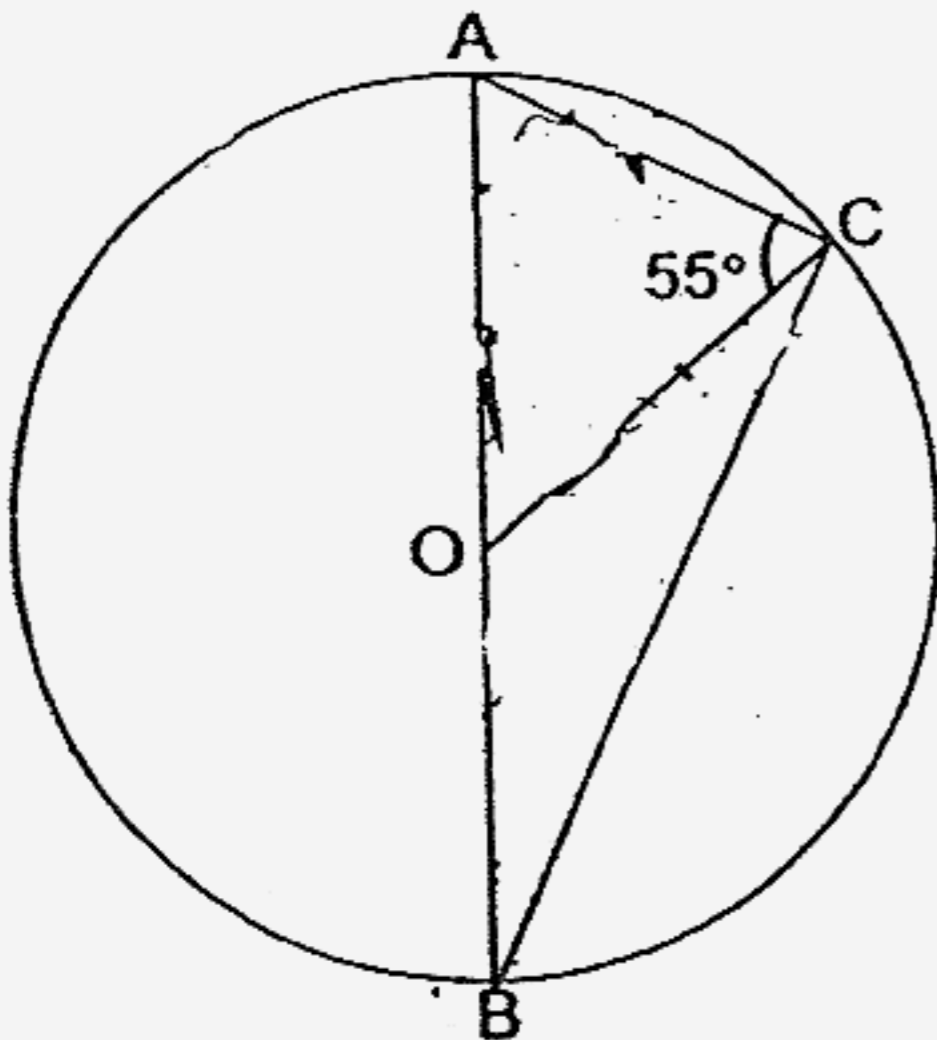
p.m.

30. The model below shows the number of Singapore and Australian stamps found in a stamp album. How many more Australian stamps were there?



stamps

31. In the figure shown below, not drawn to scale, O is the centre of the circle and AB, AC, BC and OC are straight lines. Given that $\angle OCA = 55^\circ$, find $\angle OBC$.



°

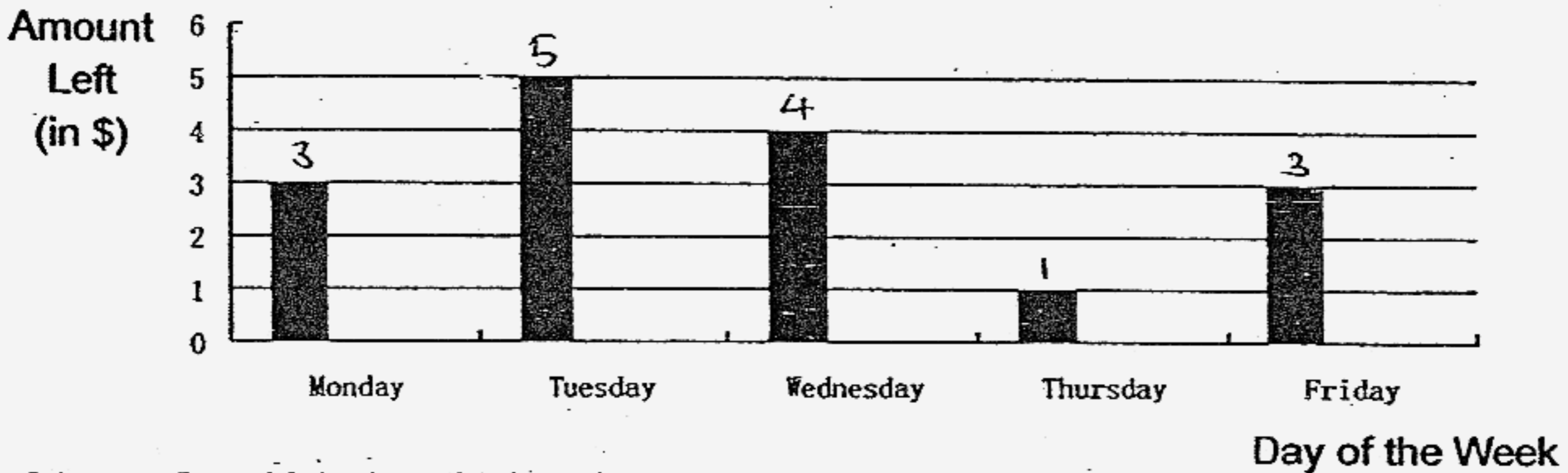
32. A man can travel from Town A to Town B in 5 hours if he drives at 40 km/h. How long will he take if he increases his speed by n km/h?

h

33. Mrs Koh only had 20¢ and 50¢ coins and her 20¢-coins added up to the same value as her 50¢-coins. She realized she had just enough coins to exchange for \$10 notes. If she had more than \$40 but less than \$100, write down a possible number of coins that she could have.

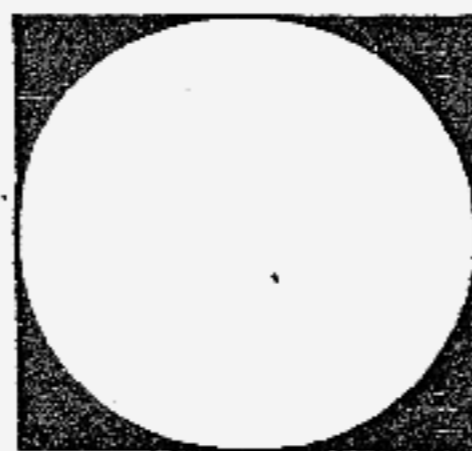
coins

Junming had \$6 with him when he went to school every morning. The bar graph below shows the amount of money he had left at the end of each school day. Study it carefully and answer Question 34.



34. On which day did Junming spend the least amount of his pocket money and how much was this amount?

day, \$



35. The diagram above shows a circle that fits perfectly in a square. If the perimeter of the square is $2p$ cm, find the radius of the circle. (Express your answer in terms of p).

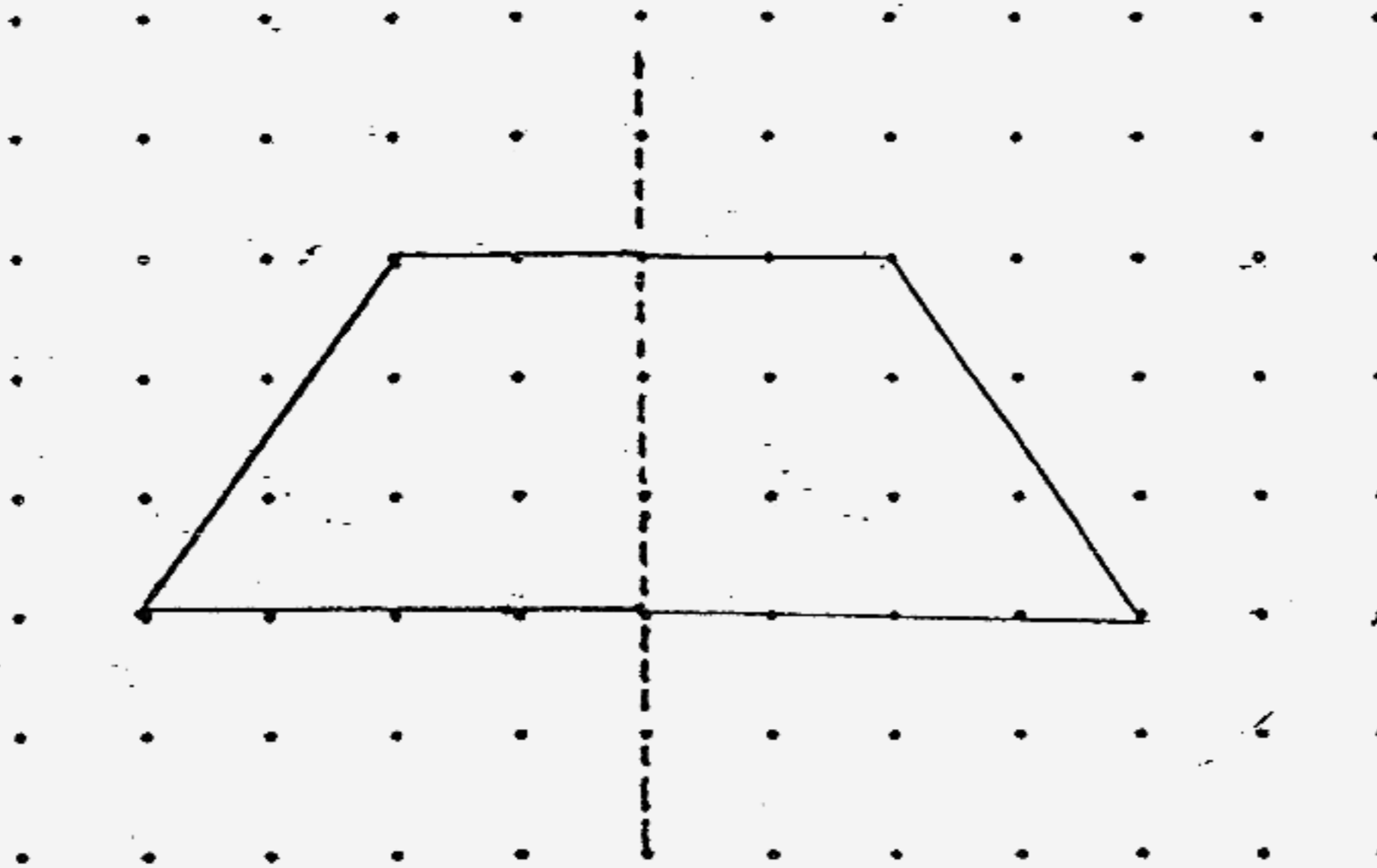
cm

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Section C (50 marks)

For questions 36 to 48, show your working clearly in the space provided for each question and write your answer in the spaces provided. The number of marks available is shown in brackets [] at the end of each question or part-question.

36. In the diagram shown below, the dotted line is the line of symmetry of an incomplete figure. Complete it



[2]

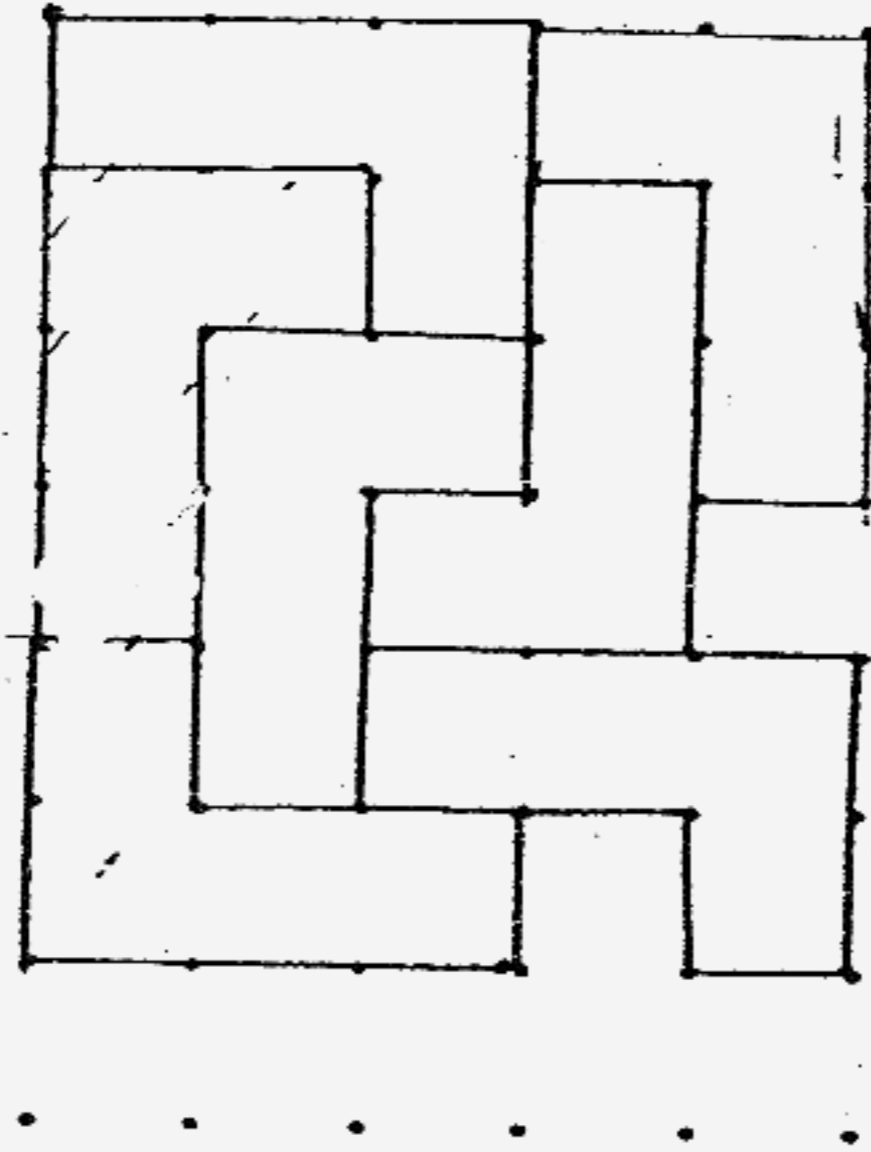
What is the special name given to the shape of the completed figure?

Answer: _____ [1]

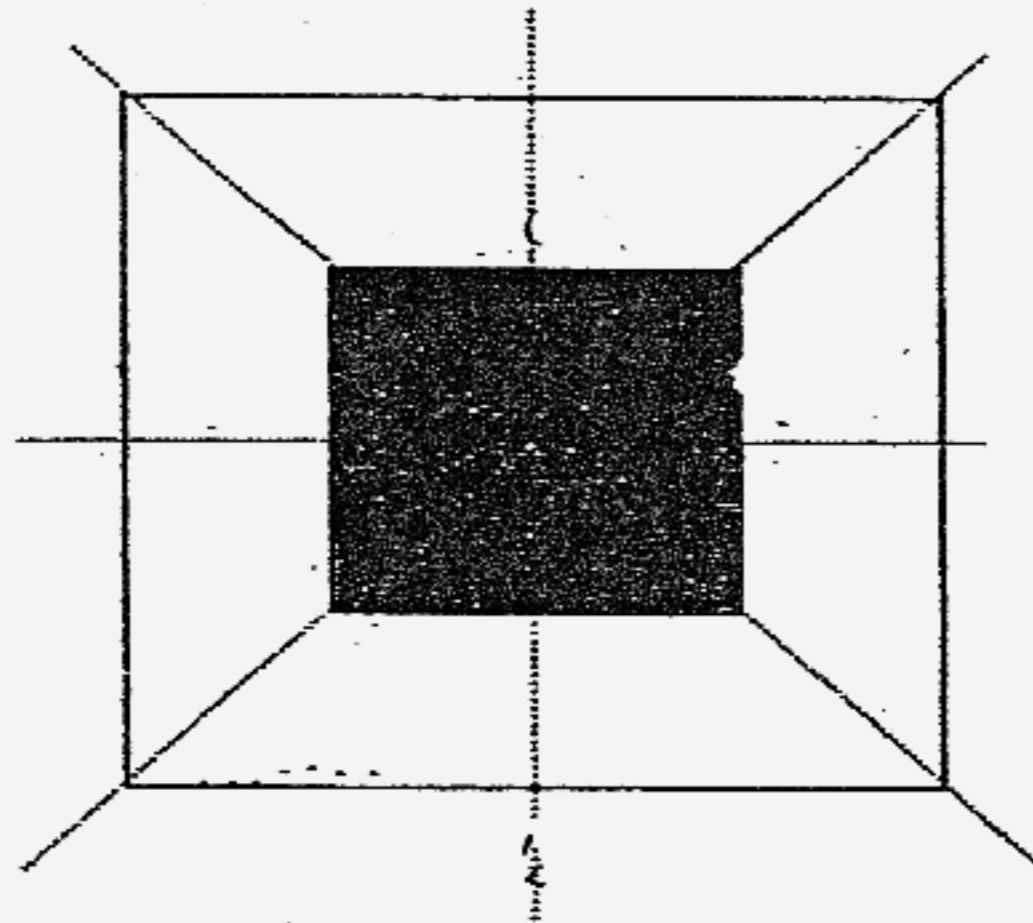
37. At first, the amount of money Sally had to that Molly had was $\frac{5}{6}$ and Molly had $\frac{1}{2}$ as much as Mandy. Sally and Molly were then given a total of \$24 and the 3 girls had the same amount of money each finally. Find the sum of money the 3 girls had at first.

Answer: _____ [3]

38. The following diagram is a tessellation of a unit shape.



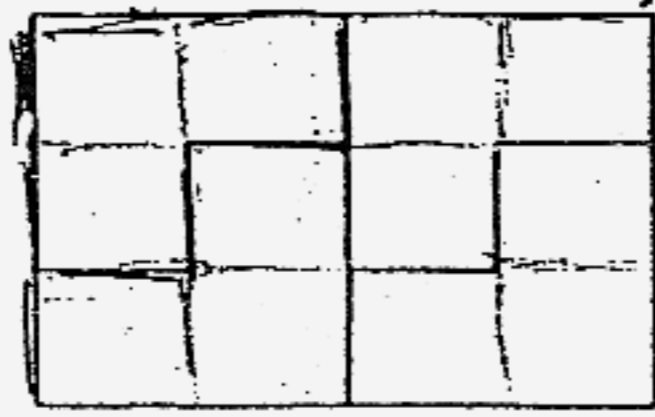
- (a) Colour one of the unit shapes. [1]
 (b) Using only the given dots, extend the tessellation by adding one more unit shape without flipping it. [2]



39. The diagram above shows a smaller square piece of paper pasted onto a larger one. The four dotted lines show the lines of symmetry. Given that the area of the smaller square is 4 cm^2 , what is the perimeter of the larger square?

Answer: _____ [3]

40. The rectangle shown below is a tessellation of 4 of the same unit shape. Each unit shape is formed by three identical squares.

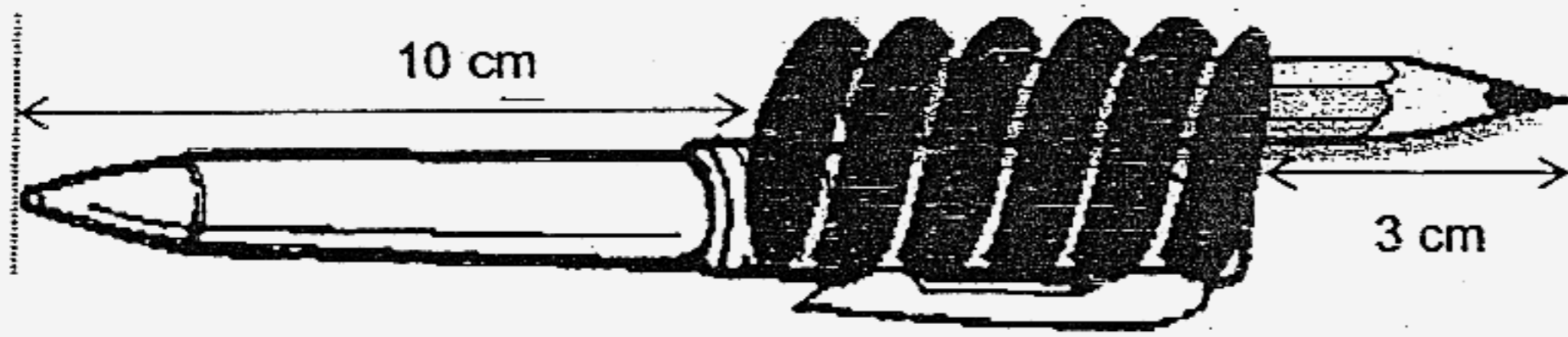


The perimeter of the rectangle is 42 cm. Find:

- (a) the perimeter of each unit shape and
- (b) the area of the figure.

Answer: (a) _____ [2]

(b) _____ [2]



41. Tom tied his pen to his pencil as shown in the diagram above to form a toy. The length of the pencil is $\frac{3}{5}$ the length of the pen. What is the length of the toy?

Answer: _____ [4]

42. During a sale, a departmental store offered a storewide discount of a certain fixed percentage. Mrs Goh paid \$16 for a dress during the sale and saved \$4.
- (a) What is the percentage discount?
 - (b) How much did Mr Goh save if he paid \$20 for his purchases during the sale?

Answer: (a) _____ [2]

(b) _____ [2]

43. Using $\frac{3}{5}$ of his money, Derek could buy 8 similar pens.

If he was given an extra dollar, he could use it together with the rest of his money to buy another 6 such pens.

How much money had Derek?

Answer: _____ [4]

44. Two motorists, X and Y, travelled on the same route from Town A to Town B. They each drove at a uniform speed but started their journey at a different time of the day.

The table below shows some details of their journey.

Motorist	Distance from Town A	Time	Distance From Town B	Time
X	60 km	13 25	60 km	15 55
Y	100 km	13 25	100 km	15 55

if Motorist X reached Town B at 16 25, find:

- (a) the distance between the two towns and
(b) the speed at which Motorist Y was travelling.

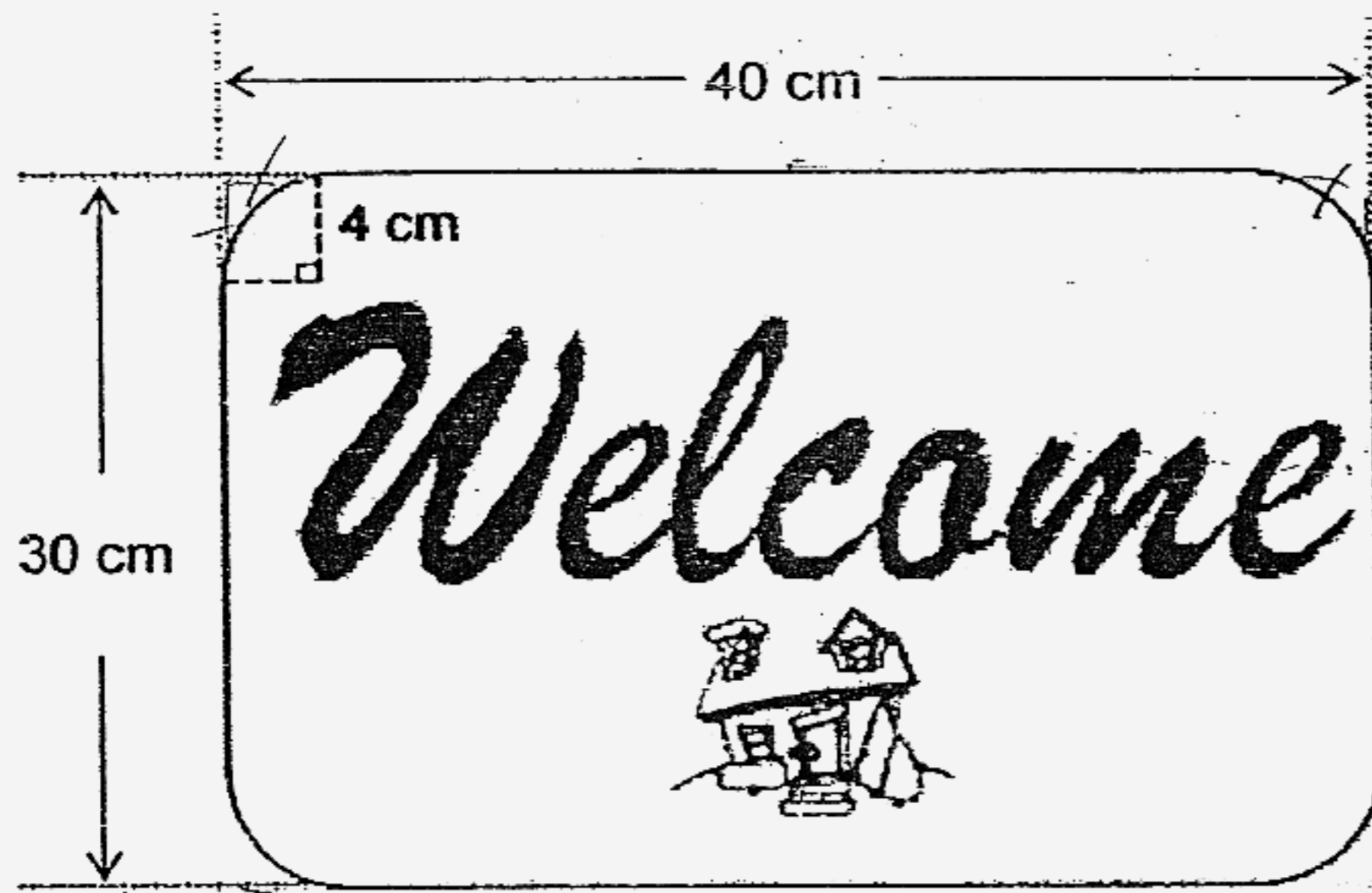
Answer: (a) _____ [2]

(b) _____ [2]

45. In a frog-leaping competition, for every two leaps made by a big frog, a small frog would have to leap thrice.
In a 100-m race, the big frog leapt 50 times.
- (a) How many times did the small frog leap?
 - (b) How many metres did the small frog move with each leap?

Answer: (a) _____ [2]

(b) _____ [2]



46. Each corner of the floor mat shown above is made up of a quadrant of radius 4 cm. Taking $\pi = 3.14$, find the perimeter of the floor mat.

Answer: _____ [4]

47. Ali, Bala and Krisnan went to a shopping centre and bought a present for their friend. They agreed to share the cost of the present equally but Ali did not have any money with him that day and Bala did not bring enough to pay for his share. As a result, the amount of money Bala paid to that paid by Krisnan was 1 : 4.

The next day, Bala returned \$12 to Krisnan.

Find

- (a) how much money Bala brought along with him to the shopping centre and
- (b) the cost of the present.

Answer: (a) _____ [3]

(b) _____ [2]

48. Two different machines, A and B, were used together at the same time to print a book.
It took two hours for the book to be printed.
If only Machine A was used, it would have taken another 4 hours.
How long would it take to print the same book if only Machine B was used?

Answer: _____ [5]

- End of Paper -



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

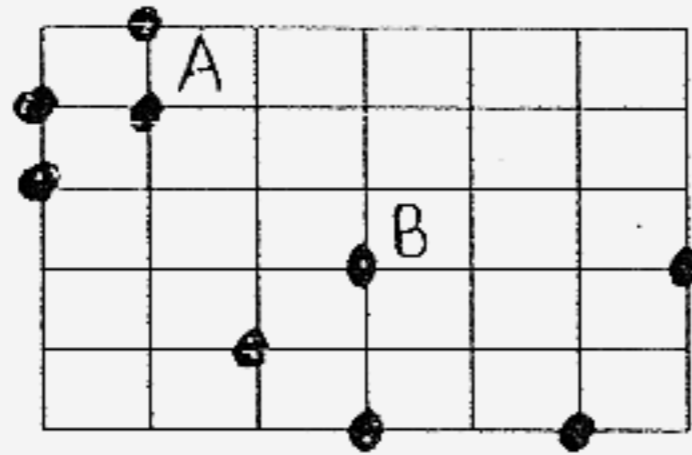
16. 28

17. 6

18. 568.99

19. 7.7cm

20.



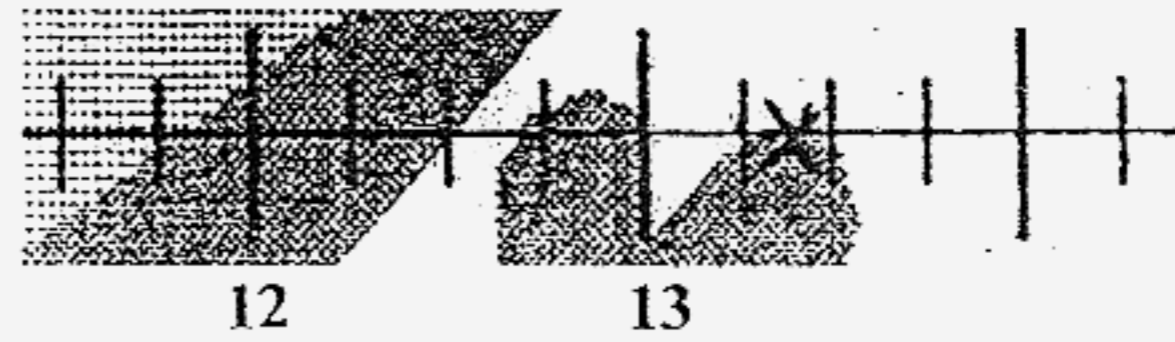
21. 86cm^2

22. \$4.20

23. 20.3cm

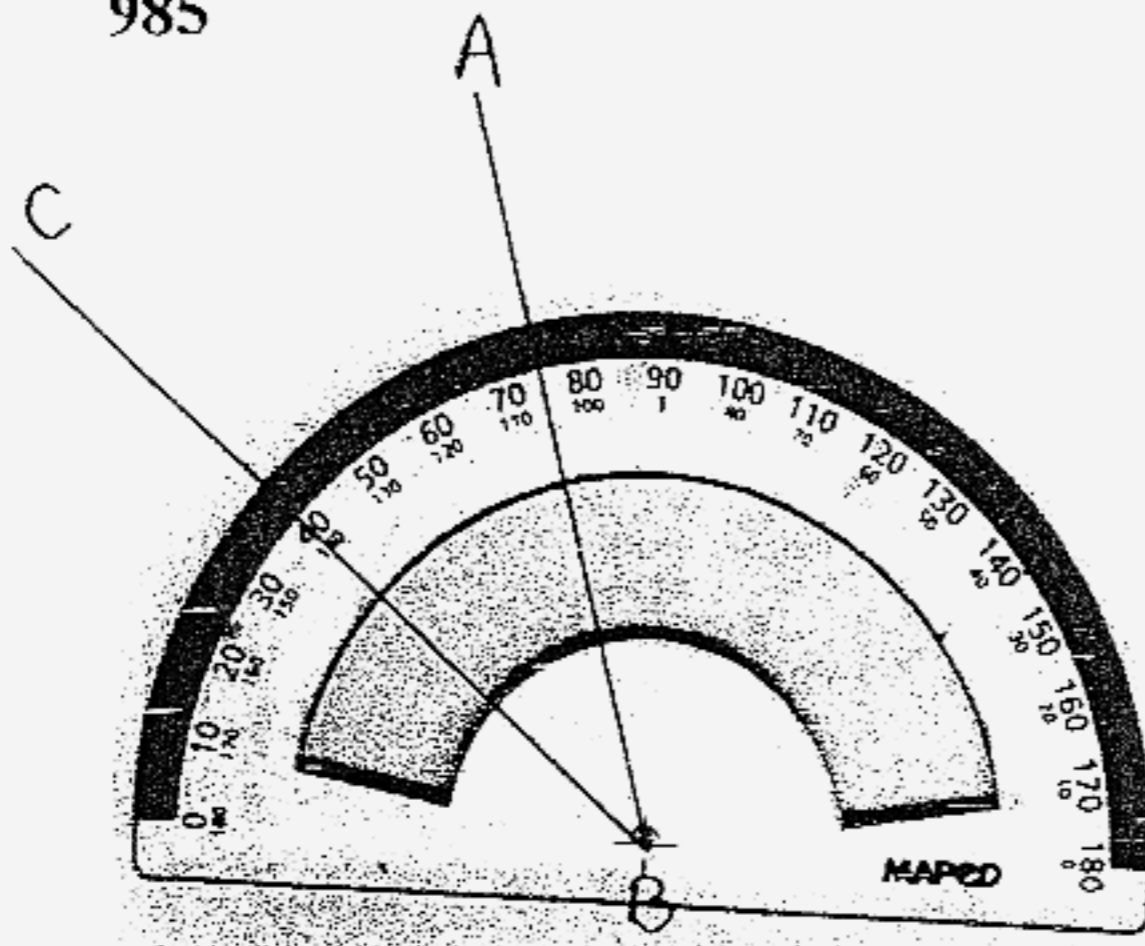
24. 192cm^3

25.



26. 985

28.



27. 436.8

29. 2.48pm

30. 26 stamps

31. 35°

32. $\frac{200}{40+n}h$

33. 210 coins

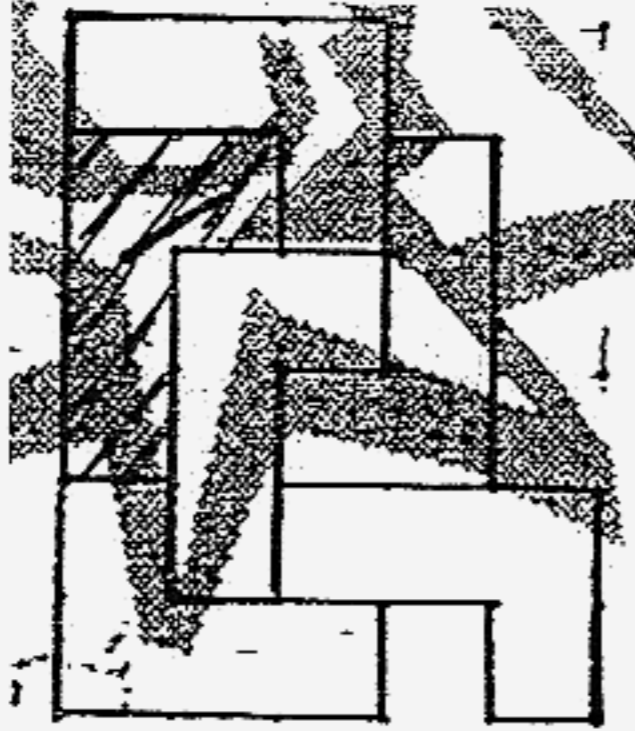
34. Tuesday, \$1

35. 0.25p cm

36. Trapezium

37. \$111

38.



39. 64cm

40a. 24cm

41. 20.5cm

40b. 108cm

42a. 20%

43. \$20

42b. \$5

44a. 420km

45a. 75 times

44b. 88 km/hr

45b. $1\frac{1}{3}m$

46. 133.12cm

47a. \$18

47b. \$90

48. 3 hours