



AI TONG SCHOOL

2006

SEMESTRAL ASSESSMENT 2

PRIMARY 5

MATHEMATICS

DURATION : 2 H 15 MIN

DATE : 27 October 2006

INSTRUCTIONS

Do not open the booklet until you are told to do so.

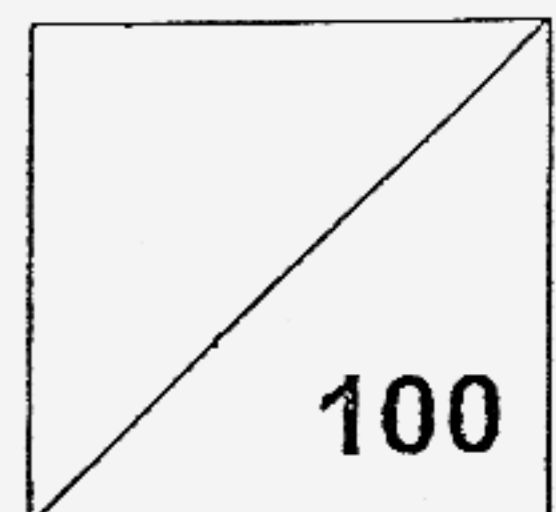
Follow all instructions.

Answer all questions.

Name :

Class : Primary 5 _____

Marks:



100

Parent's Signature : _____

Date : _____

Booklet 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 oval (1, 2, 3 or 4) on the Optical Answer Sheet. (20 marks)

1. What is value of the digit 6 in 860 293?

- (1) 60 000
- (2) 6000
- (3) 600
- (4) 60

2. How many tens are there in the sum of 468 and 112?

- (1) 80
- (2) 58
- (3) 50
- (4) 35

3. Susan baked a cake. She gave $\frac{1}{4}$ of it to her neighbour. The remaining cake was shared equally among her husband and 4 children. What fraction of the cake did her husband get?

- (1) $\frac{3}{24}$
- (2) $\frac{3}{20}$
- (3) $\frac{3}{16}$
- (4) $\frac{3}{4}$

4. Xiao Li prepared some orange juice by mixing 28 litres of water with 8 litres of syrup. What is the ratio of the amount of syrup to the amount of water used?

- (1) 1 : 7
- (2) 2 : 7
- (3) 7 : 1
- (4) 7 : 2

5. Zhang Zhe gave 40% of his 60 marbles to a friend. How many marbles had he left?

- (1) 24
- (2) 36
- (3) 40
- (4) 60

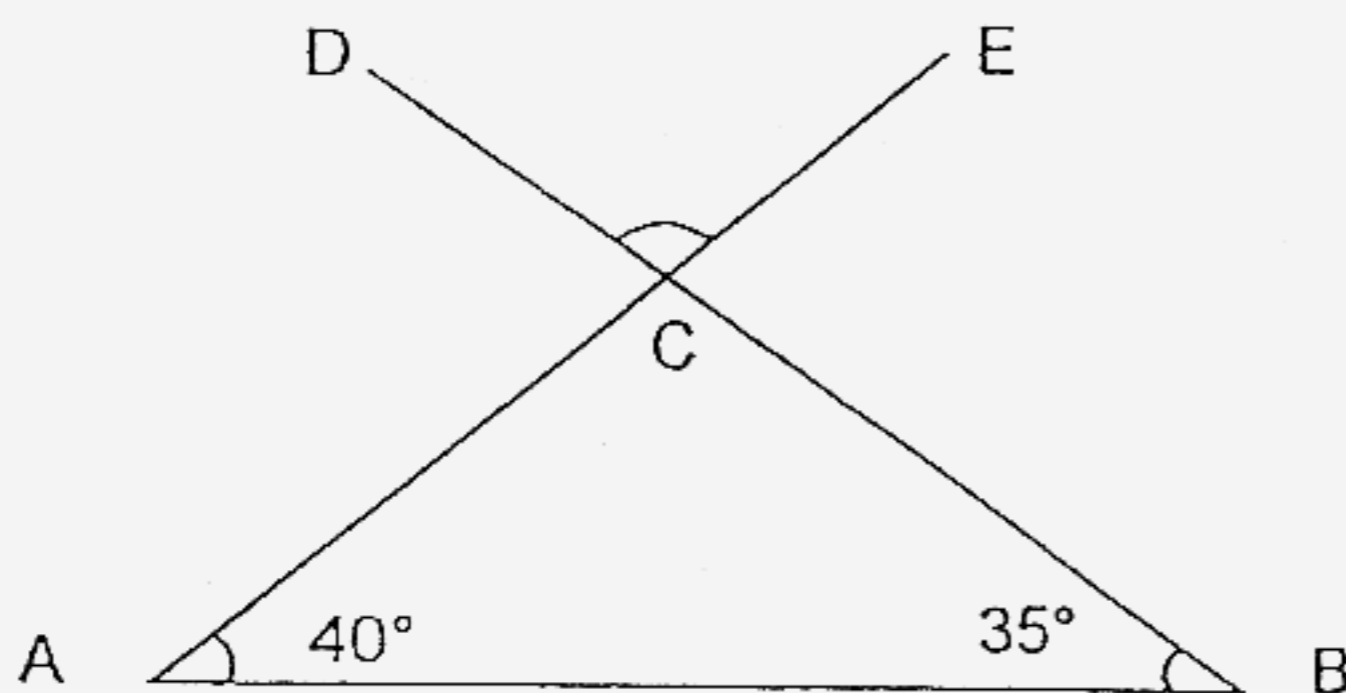
6. The average time taken for Ming Da to swim 4 laps is 75 s. If the average time taken for him to swim 3 laps is 71 s, find the time he has taken to swim the 4th lap.

- (1) 300 s
- (2) 213 s
- (3) 87 s
- (4) 4 s

7. A machine can seal 456 parcels in 1 hour. How many parcels can it seal in $2\frac{1}{2}$ hours?

- (1) 1140
- (2) 912
- (3) 684
- (4) 228

8.

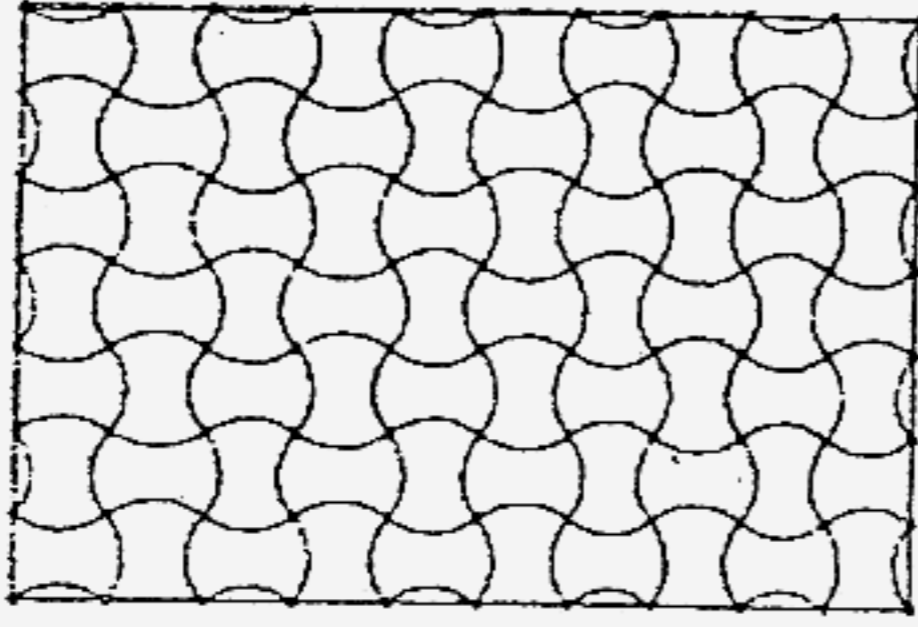


The above figure is not drawn to scale. Find $\angle DCE$.

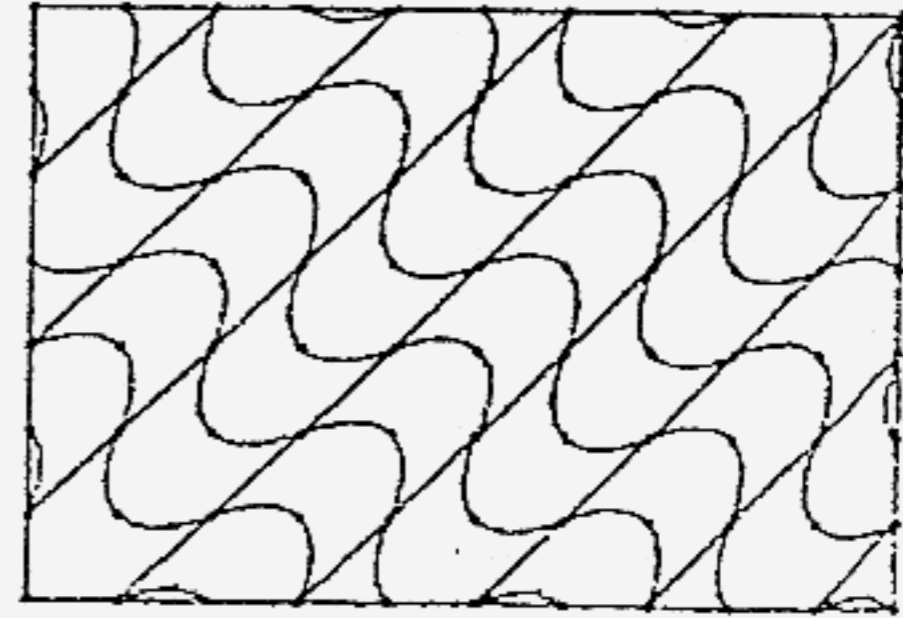
- (1) 75°
- (2) 105°
- (3) 115°
- (4) 145°

9. Which of the following patterns is not a tessellation?

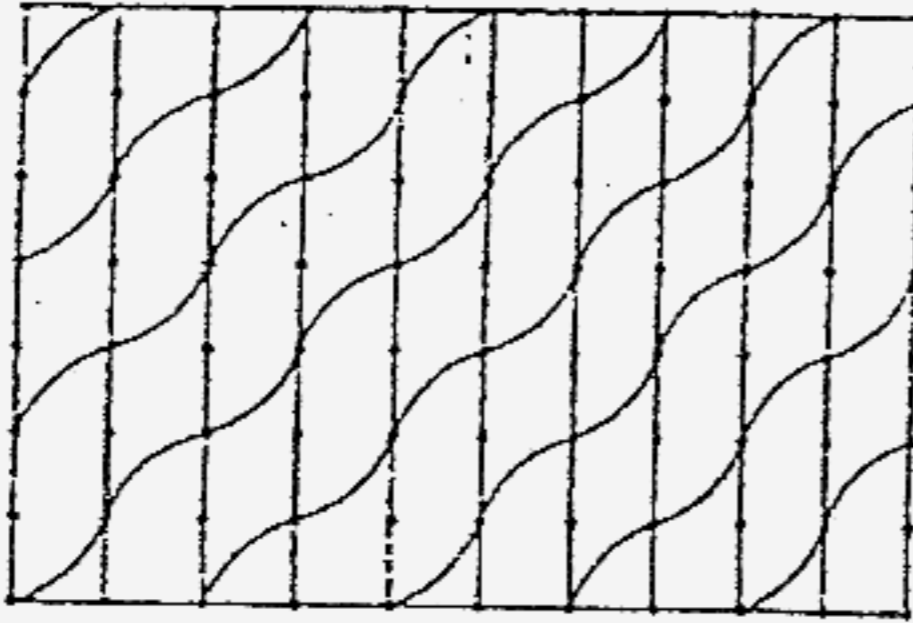
(1)



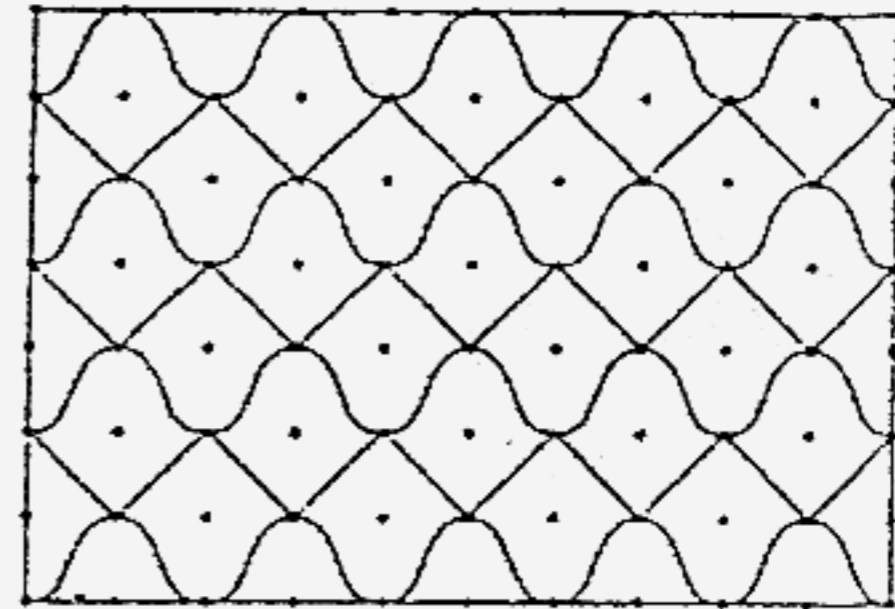
(2)



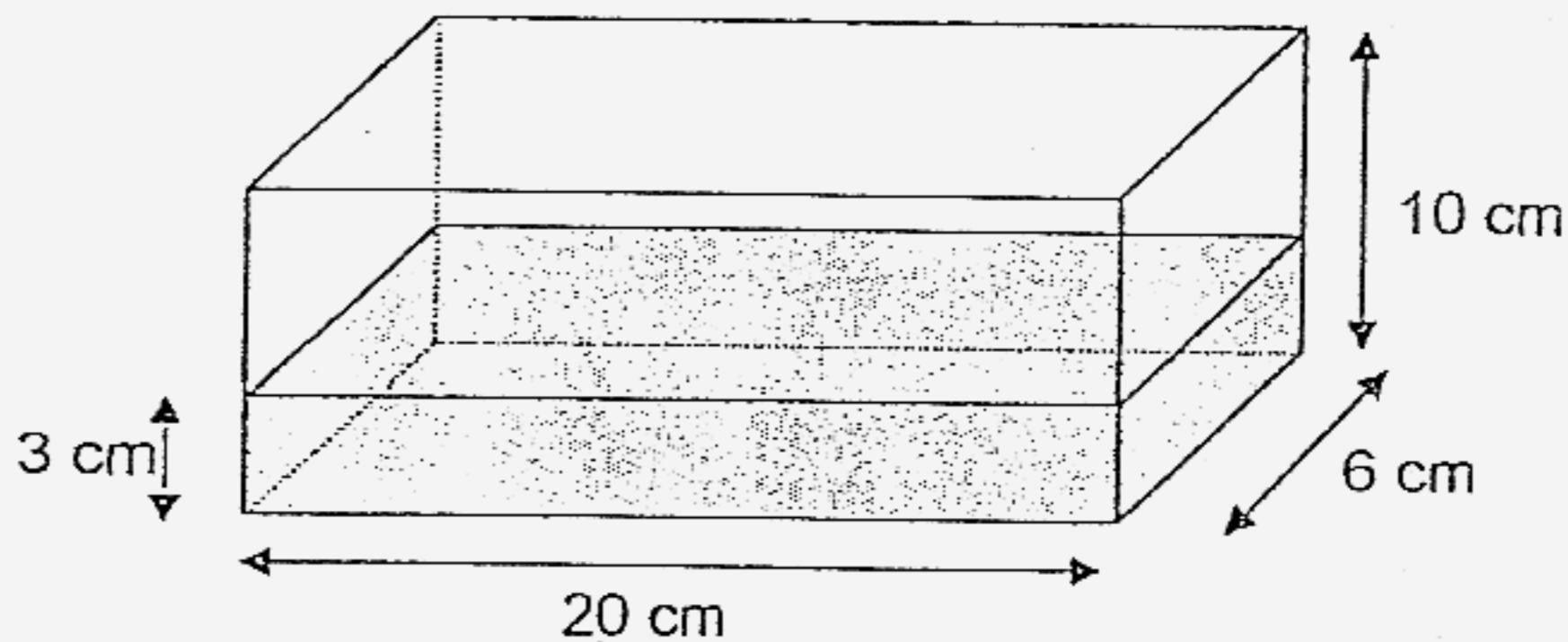
(3)



(4)



10. Find the volume of the water in the container.



- (1) 36 cm^3
- (2) 360 cm^3
- (3) 840 cm^3
- (4) 1200 cm^3

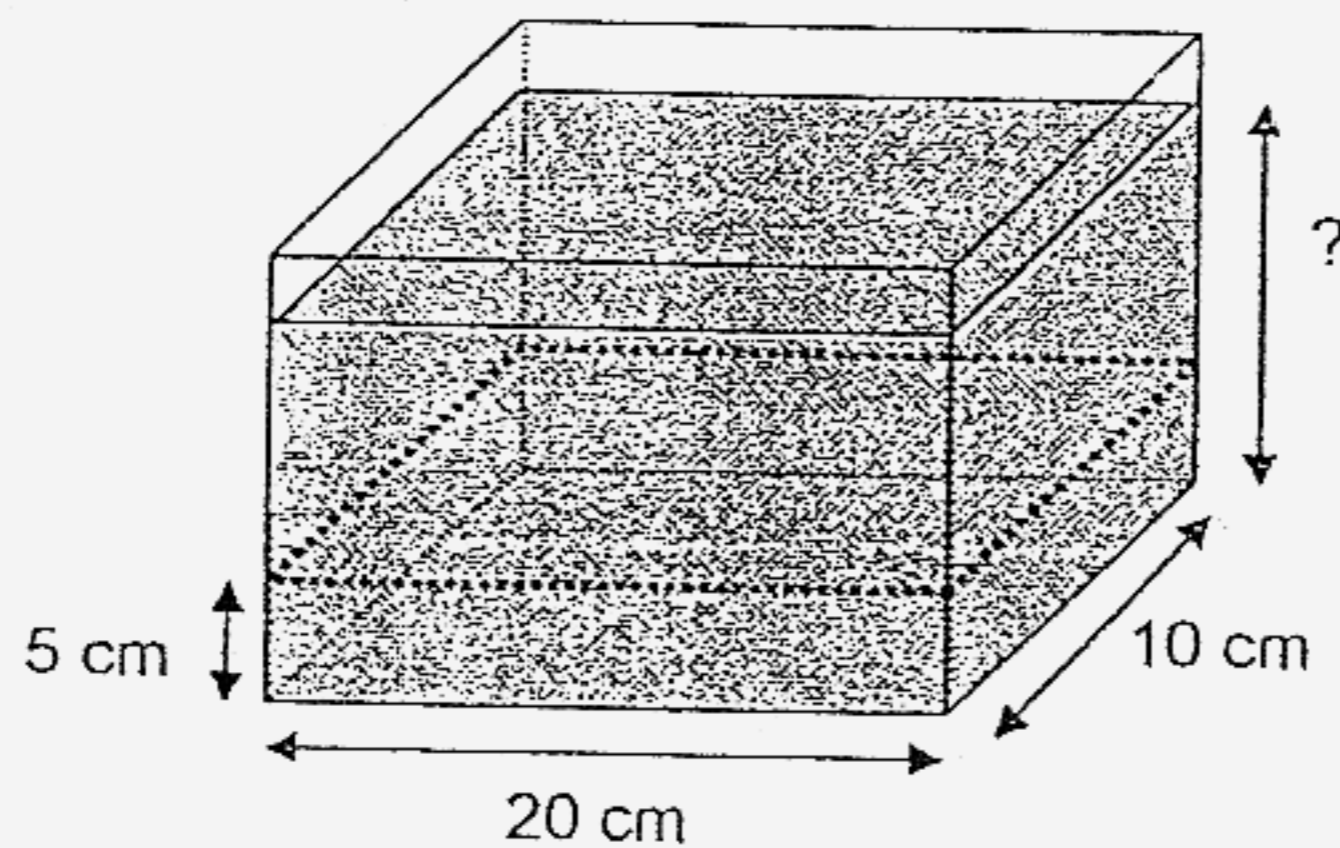
11. Hassan spent $\frac{1}{4}$ of his monthly salary on rent and $\frac{1}{5}$ of it on food. If he spent \$700 on food a month, how much was his monthly rent?

- (1) \$560
- (2) \$875
- (3) \$2800
- (4) \$3500

12. 0.2 of John's cards is equal to $\frac{1}{4}$ of Andrew's cards. If they have a total of 180 cards, how many cards did John have at first?

- (1) 20
- (2) 80
- (3) 90
- (4) 100

13. A rectangular tank is 20 cm long and 10 cm wide. The height of the water level in the container was 5 cm at first. What is the height of the water level after 3 ℓ of water is poured into the container?



- (1) 15 cm
- (2) 20 cm
- (3) 30 cm
- (4) 40 cm

14. Claudia went shopping with some money. She spent \$60 on a blouse and $\frac{3}{5}$ of the remainder on a skirt. If she had \$44 left, find the amount of money she had at first.

- (1) \$80
- (2) \$140
- (3) \$170
- (4) \$210

15. The parking charges in a car park is shown in the table below.

First hour	\$1.50
Subsequent $\frac{1}{2}$ hour or part thereof	\$1.00

If Mr Ang parked his car from 9.30 am to 1.15 pm, how much did he pay?

- (1) \$7.50
- (2) \$7.00
- (3) \$6.50
- (4) \$4.50

Booklet B

Questions 16 to 25 carry 1 mark each.

Questions 26 to 35 carry 2 marks each.

Show your working clearly in the space below each question and write your answers on the blanks provided. For questions which require units, give your answers in the units stated. (30 marks)

16. Write Two million, three thousand, two hundred and forty-seven in figures.

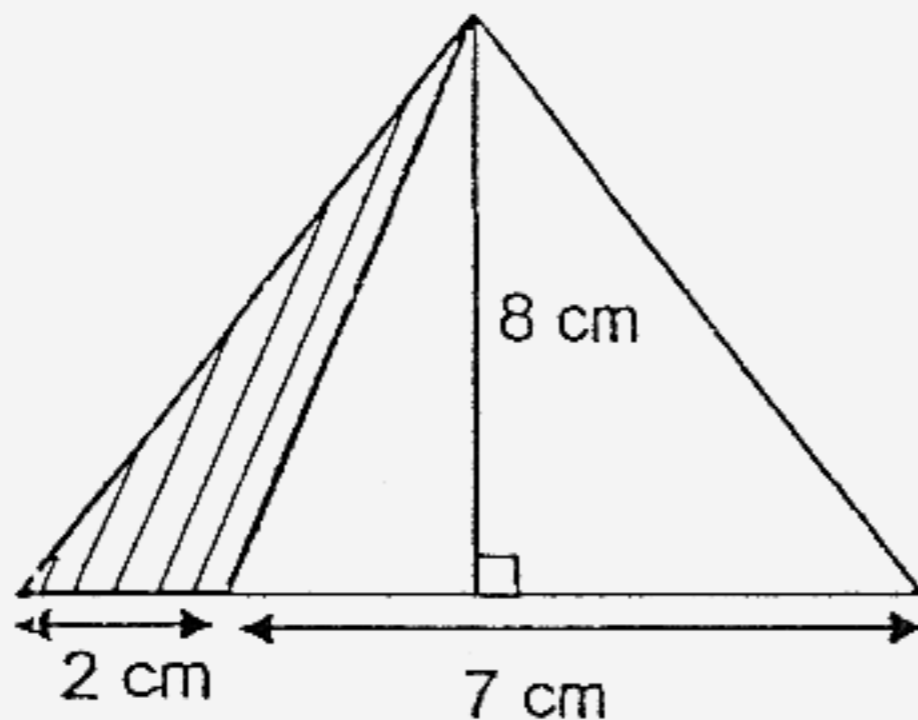
Ans: _____

17. Find the value of 213×18 .

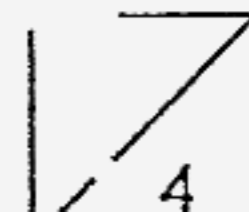
Ans: _____

18. Express $1\frac{1}{2}\%$ as a decimal.

19. Find the area of the shaded part of the figure.



Ans: _____ cm²



20. What percentage of \$4 is \$1.50?

Ans: _____ %

21. Evaluate $\frac{2}{7} \div 2 + \frac{1}{2}$

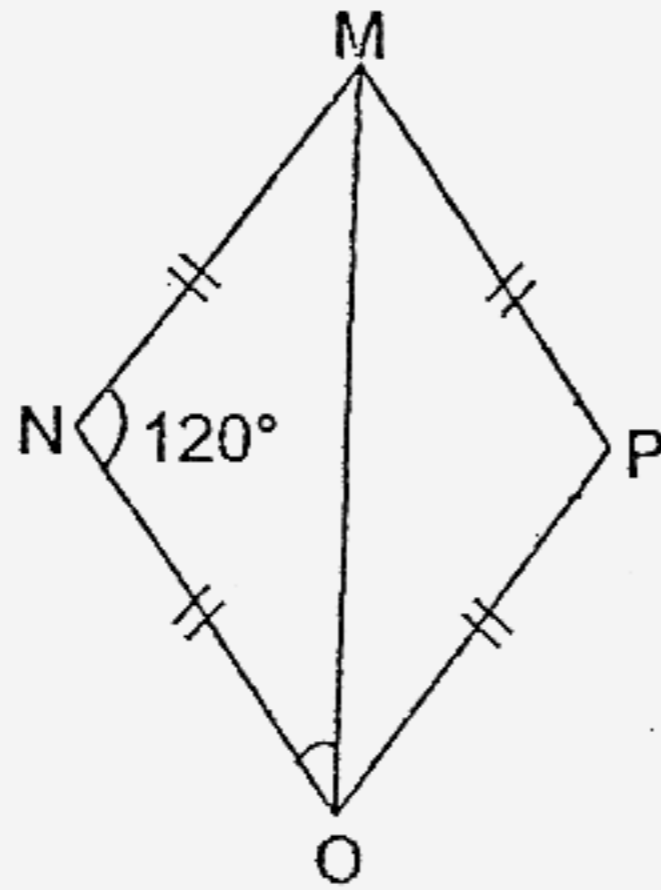
22.

English	81
Mathematics	93
Science	88
Chinese	7

Elma spilled some ink on her result slip. The average mark of the 4 subjects is 84. How many marks did she score for Chinese?

Ans _____

23. The figure below is not drawn to scale. MNOP is a rhombus. Find $\angle MON$.



Ans: _____

24. A cake is cut into 8 equal pieces. What is the minimum number of knife strokes required?

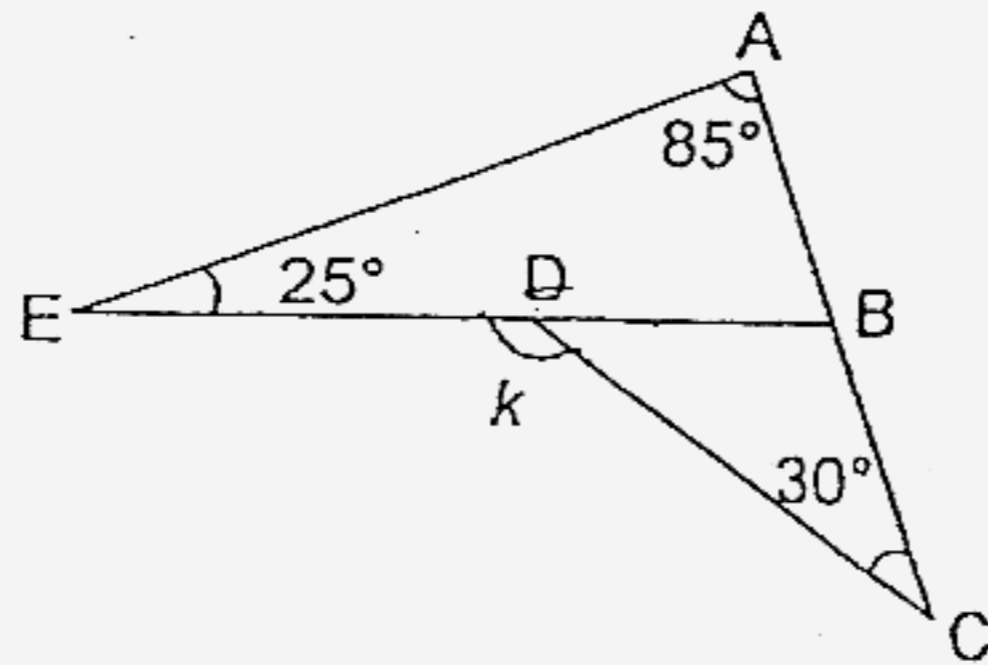


Ans: _____

25. Aminah spent \$150 and had \$350 left. What percentage of her money did she spend?

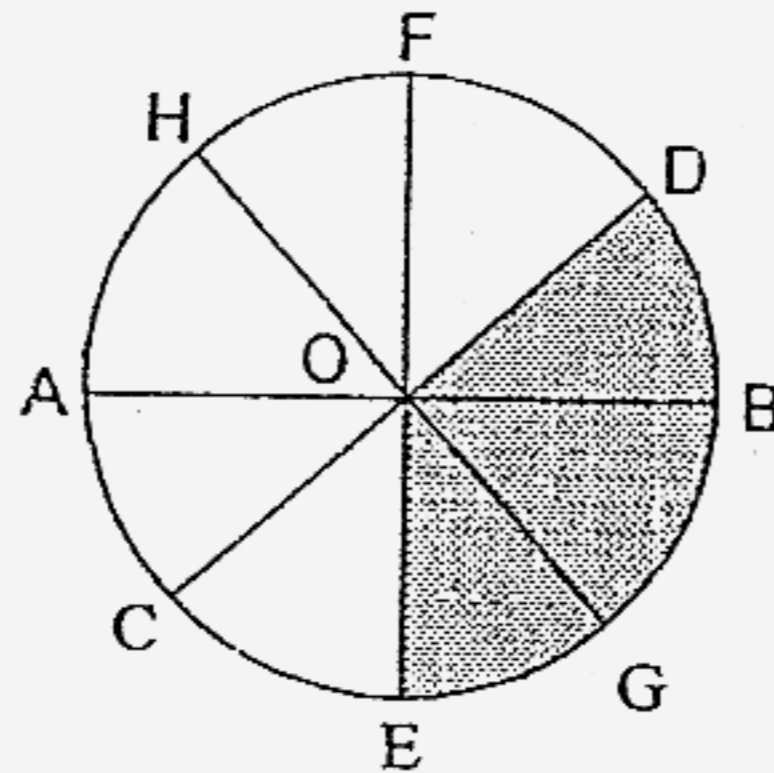
Ans: _____%

26. The figure below, not drawn to scale, is made up of 2 triangles ABE and BCD. ABC is a straight line. Find $\angle k$.



Ans: _____

- 27.



O is the centre of the circle. AB, CD, EF and GH are straight lines which cut the circle into 8 equal parts. What percentage of the circle is shaded?

Ans: _____ %

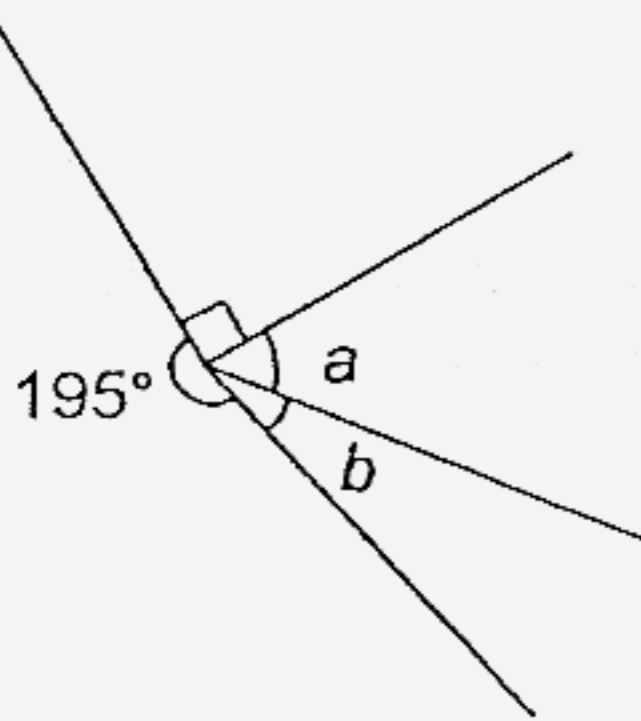
28. Susan and Patricia have \$150 altogether. If Susan has \$30 more than Patricia, express the amount of money Susan has as a ratio of the amount of money Patricia has in the simplest form.

Ans: _____

29. $\frac{2}{3}$ of Peter's money is equal to $\frac{3}{4}$ of Tim's money. Express Peter's money as a ratio of Tim's money.

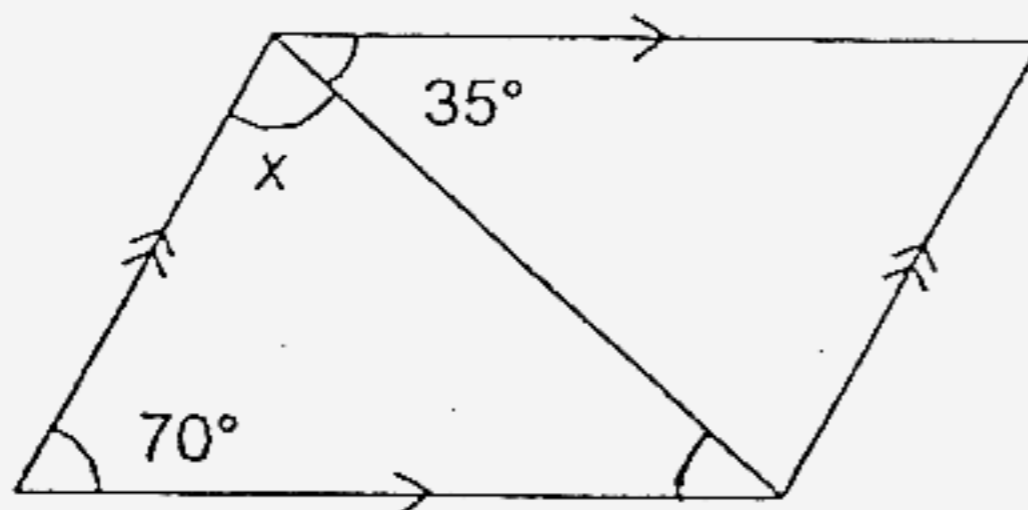
Ans: _____

30. The figure below is not drawn to scale. $\angle a$ is twice as large as $\angle b$. Find $\angle b$.



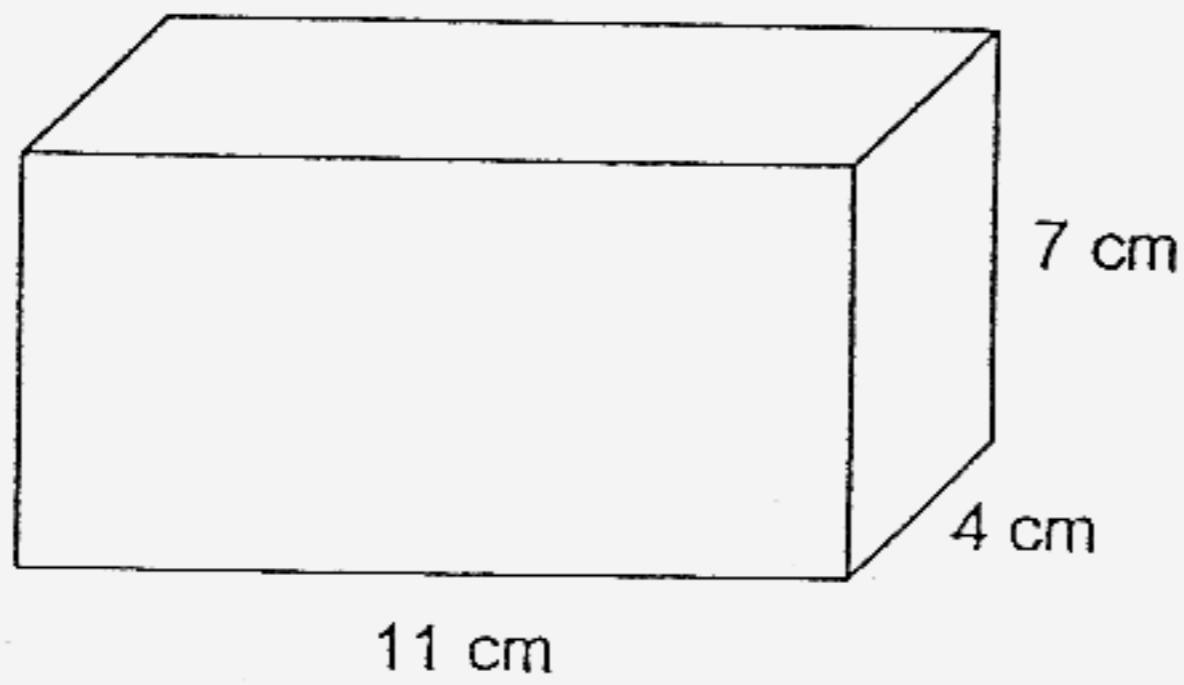
Ans: _____

31. The figure below is a parallelogram and is not drawn to scale. Find $\angle x$.



Ans: _____

32. How many 2-cm cubes can be cut from the following wooden block?



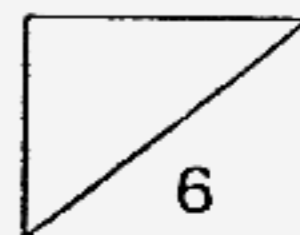
Ans: _____

33. The average weight of 5 boys is 82 kg. If the total weight of 2 of the boys is 200 kg. What is average weight of the remaining boys?

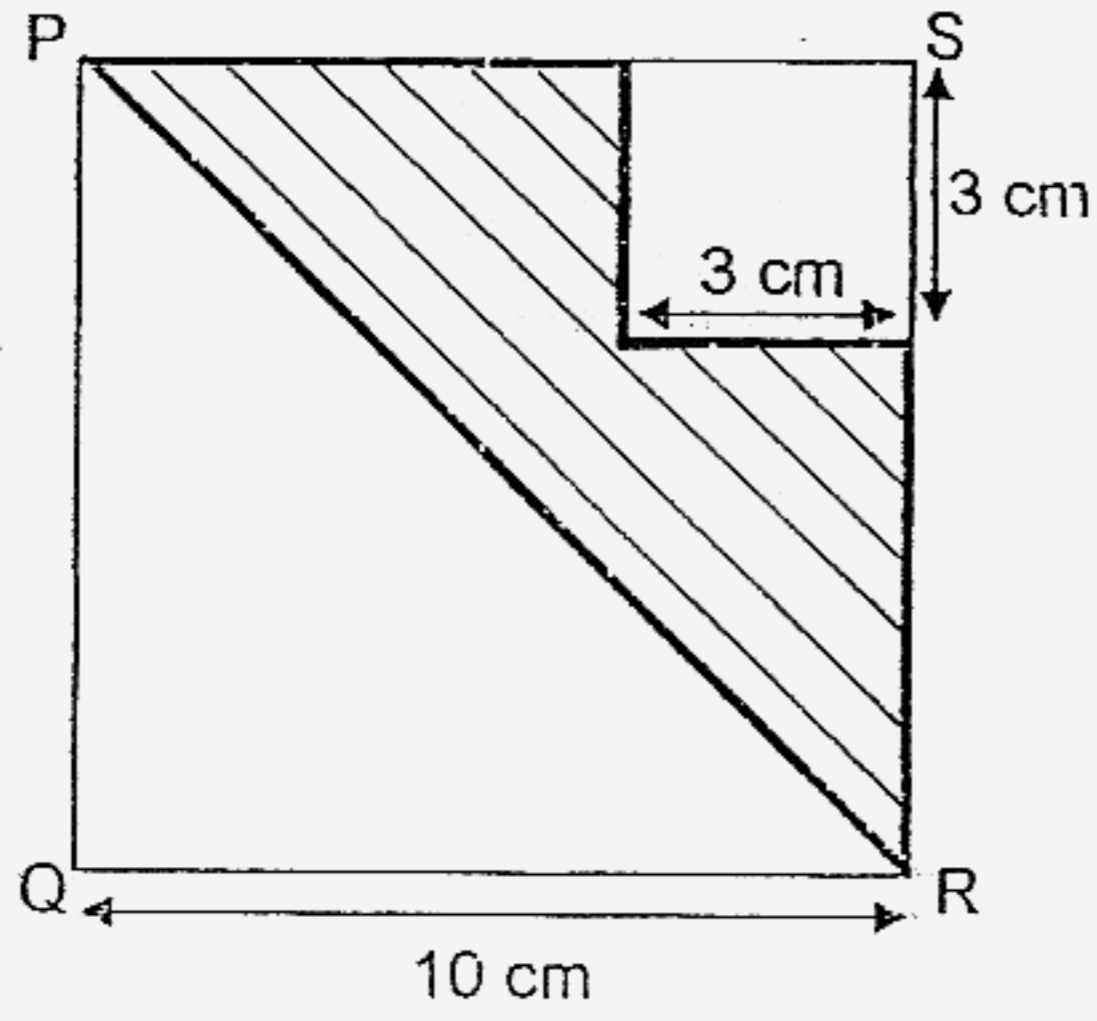
Ans: _____ kg

34. When Mr Low is 32 years old, his daughter is 5 years old. In how many years' time will Mr Low be 4 times as old as his daughter?

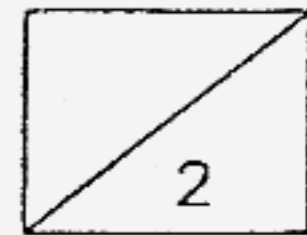
Ans: _____



35. PQRS is a square. What is the area of the shaded part?



Ans: _____ cm^2



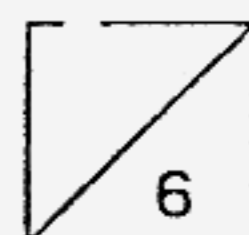
For questions 36 to 48, show your working clearly in the space below each question and write your answers in the spaces provided.
The number of marks awarded is shown in brackets [] at the end of each question or part-question. (50 marks)

36. 0.5 kg of roast pork cost \$15. James bought 2.5 kg of roast pork. If he gave the cashier \$100, how much change would he get?

Answer: _____ [3]

37. Mrs Wang baked 512 cookies and sold them in boxes of 32. Each box of cookies was sold at \$12.50. How much did she earn?

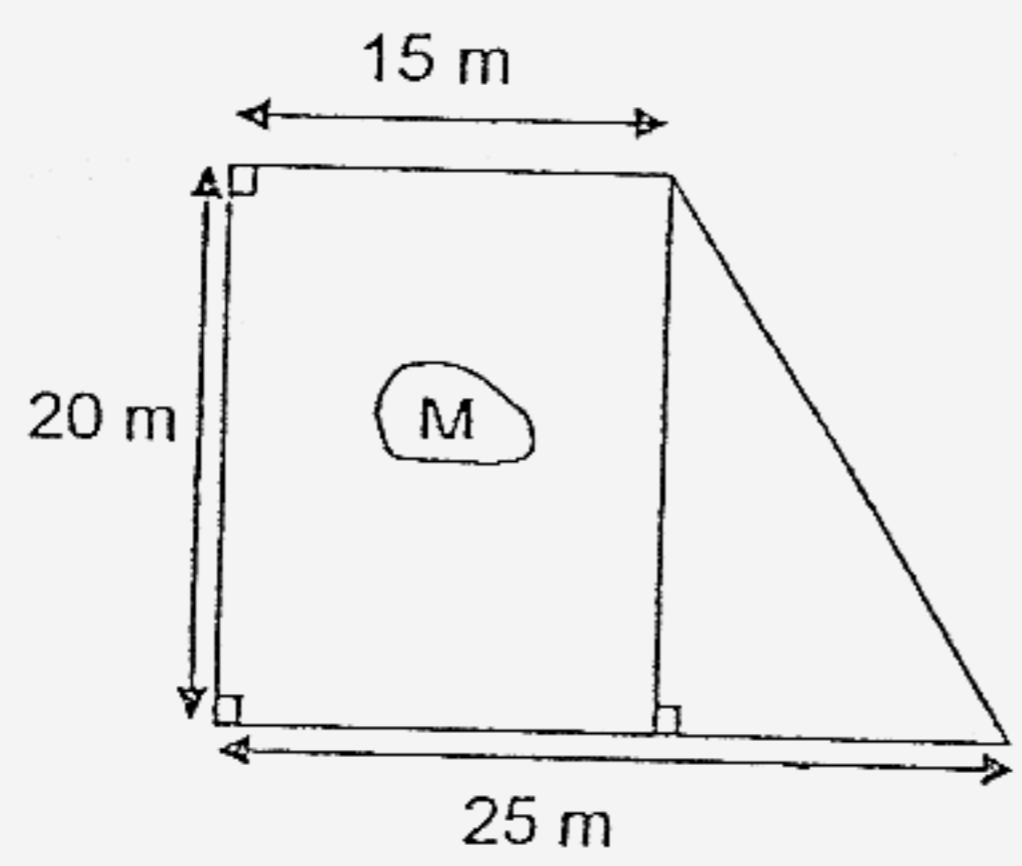
Answer: _____ [3]



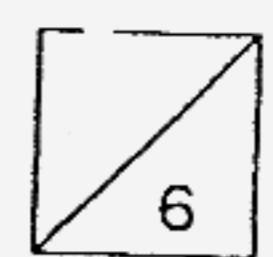
38. Claire and Grace had \$560 altogether. Claire received another \$80 from her father. She then had thrice as much money as Grace. How much money did Claire have originally?

Answer: _____ [3]

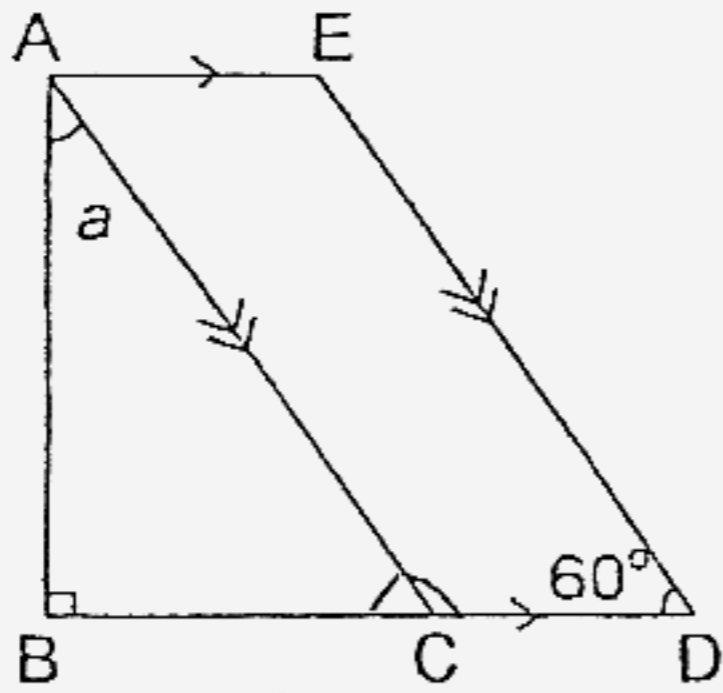
39. The figure shows a field which consists of a rectangle and a triangle. The area of Pond M is 36 m^2 . Find the area of the whole field, excluding Pond M. (3)



Answer: _____ [3]



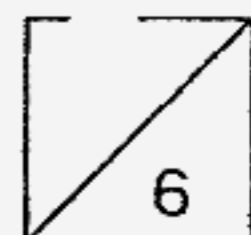
40. The following figure is not drawn to scale. ABC is a right-angled triangle and ACDE is a parallelogram. Find $\angle a$.



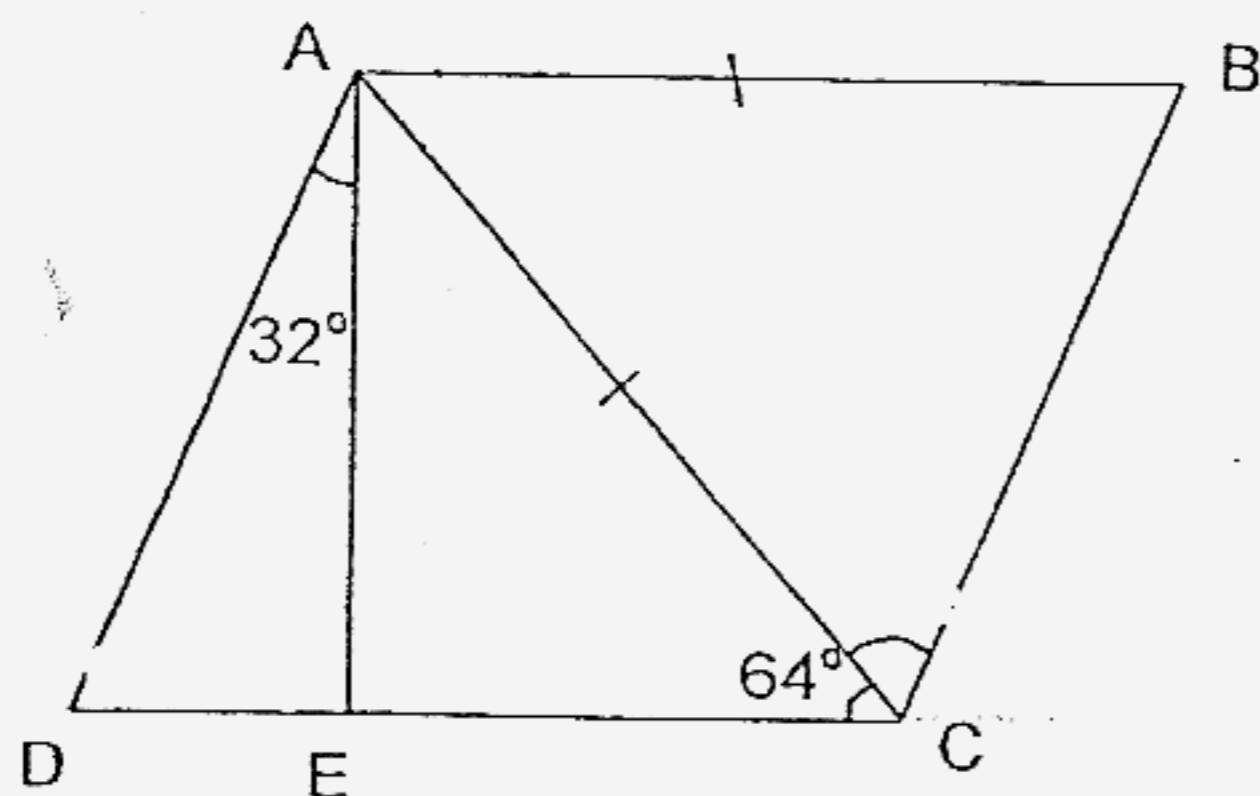
Answer: _____ [3]

-
41. A container is $\frac{1}{9}$ filled with water. When David pours another 25 litres of water into it, it becomes $\frac{2}{3}$ full. Find the capacity of the container.

Answer: _____ [3]



42. The following figure is not drawn to scale. ABCD is a parallelogram and ABC is an isosceles triangle. Find $\angle CAB$. (4)



-
43. The ratio of Ali's sweets to Bala's to Charlie's was 1 : 2 : 4. When Charlie gave away 60 sweets to be shared between Ali and Bala, he found that the 3 of them had the same number of sweets. How many sweets did Bala have at first? (4)

44. Alton is twice Brandon's age. Charlie is $\frac{1}{6}$ the total age of Alton and Brandon.

If Alton is 24 years old, what is the average age of the 3 boys? (4)

45. John and Mary read a total of 30 books in May. In June, John read 9 books fewer than Mary who had read thrice as many as she did in May. If both of them read a total of 45 books in June, how many books did John read in the 2 months? (5)

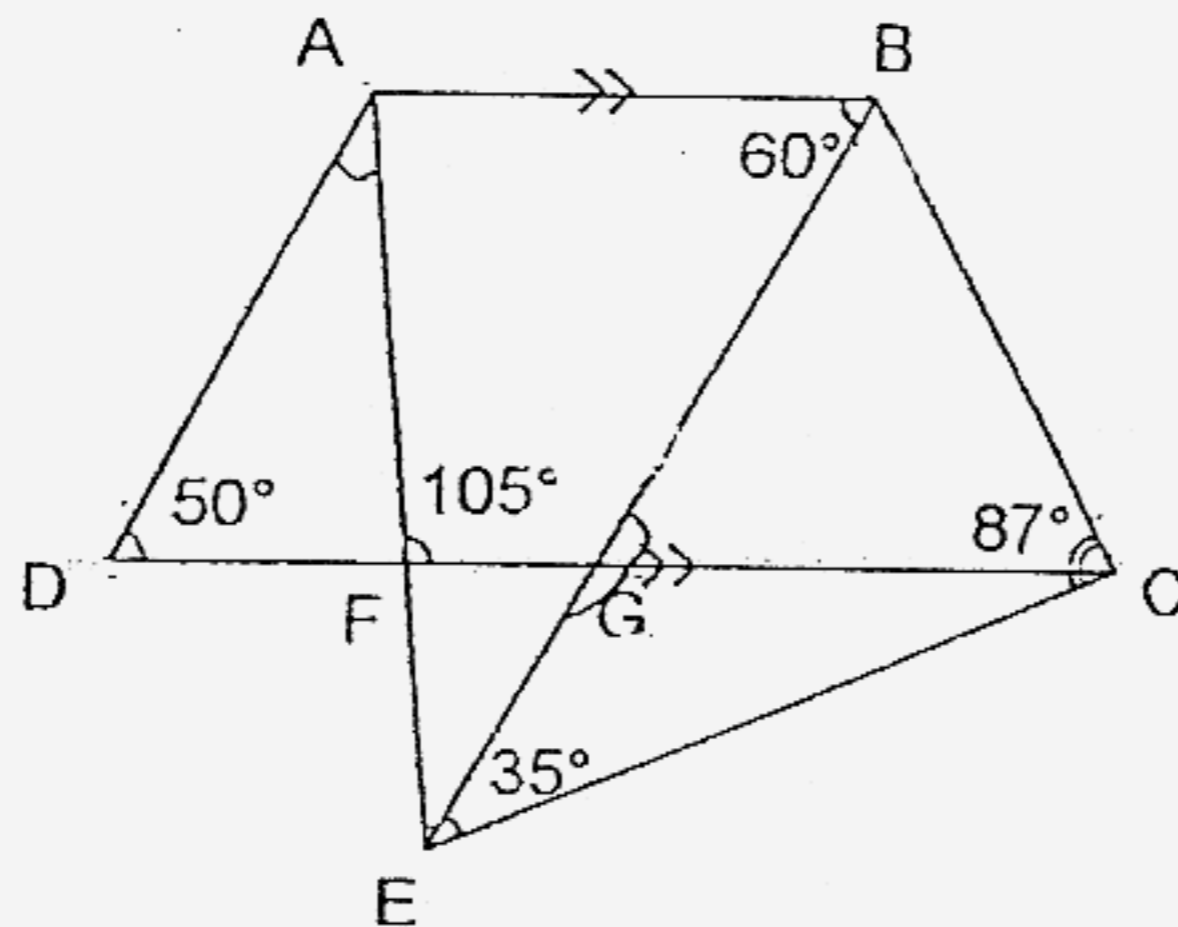
46. Armani's monthly salary was \$3000. Every month, he would give 40% of his salary to his father. He would spend 40% of his remaining salary on rent and saved the rest.

(a) How much did he spend on rent? (2)

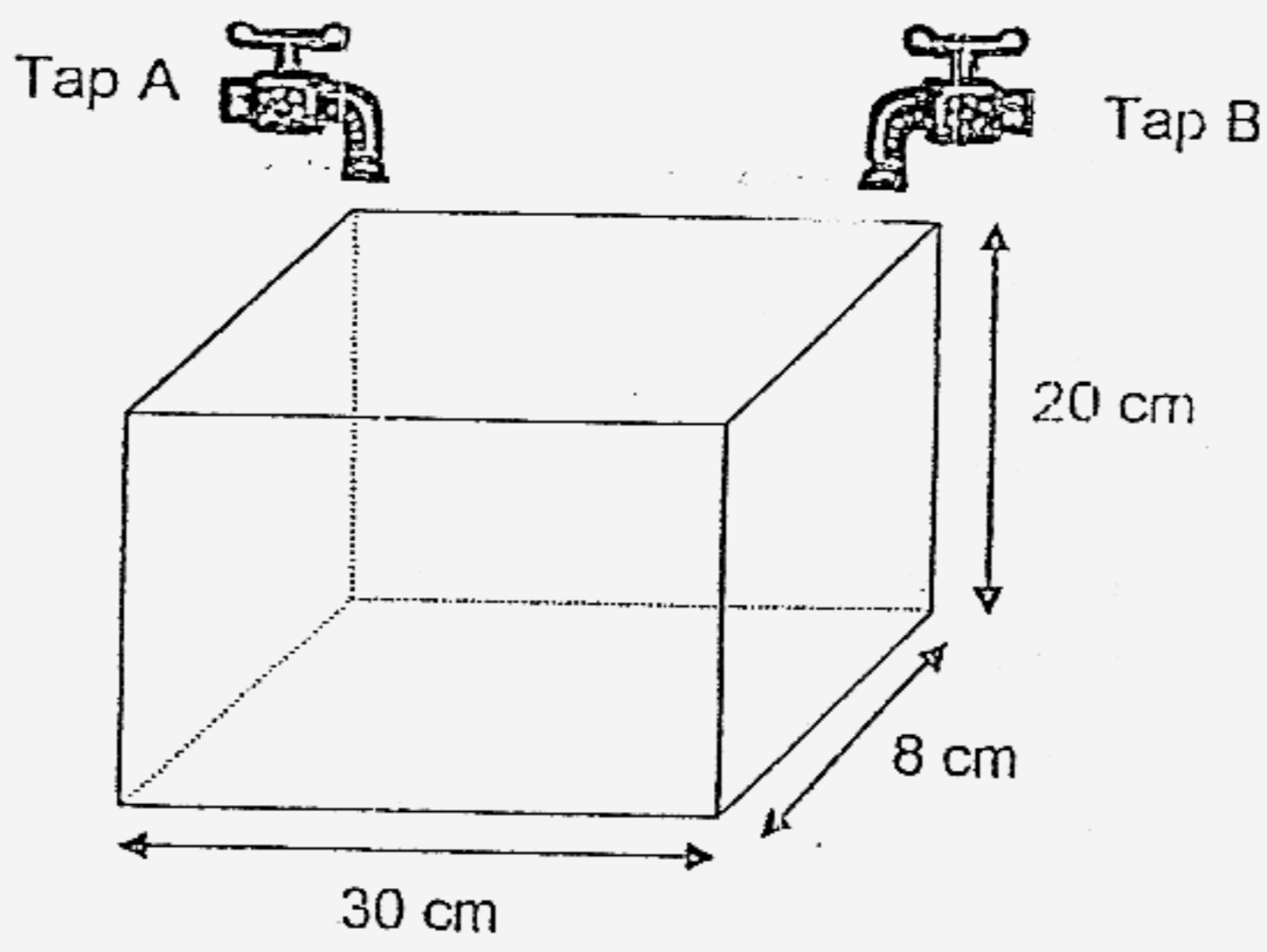
(b) What percentage of his monthly salary did he save? (3)

47. The following figure is not drawn to scale. ABCD is a trapezium and $\angle BCE = 87^\circ$.

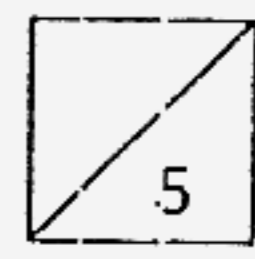
- Find (a) $\angle CBE$ (1)
(b) $\angle DCE$ (2)
(c) $\angle DAE$ (1)



48. When Tap A was turned on, it took 10 minutes to fill up the tank with water. But it took only 8 minutes to fill up the same tank with water when both Tap A and Tap B were turned on at the same time.
What was the rate per minute at which the water flowed out from Tap B? (5)



--- CHECK YOUR WORK CAREFULLY ---



Ai Tong Primary School

Answer Sheets

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

16. 2 003 247

17. $213 \times 18 = 3834$

18. $1\frac{1}{2} = 1.5$

19. $\frac{1}{2} \times 2 \times 8 = 8\text{cm}^2$

$1.5 \div 100 = 0.015$

20. $\frac{150}{400} \times 100 = 37\frac{1}{2}\%$

21. $\frac{2}{7} \div 2 + \frac{1}{2}$

$$\begin{aligned}\frac{2}{7} \times \frac{1}{2} + \frac{1}{2} &= \frac{1}{7} + \frac{1}{2} \\ &= \frac{9}{14}\end{aligned}$$

22. $84 \times 4 = 336$
 $336 - (81 + 93 + 88) = 74$

23. $\angle \text{MON} = 180^\circ - 120^\circ = 60^\circ$
 $60^\circ \div 2 = 30^\circ$

24. 4

25. $\frac{150}{500} \times 100 = 30\%$

26. $\angle \text{ABE} = 180^\circ - (85^\circ + 25^\circ)$
 $= 70^\circ$
 $\angle \text{DBC} = 180^\circ - 70^\circ = 70^\circ$
 $\angle k = 110^\circ + 30^\circ = 140^\circ$

27. 8 parts = 100%
4 parts = $37\frac{1}{2}\%$

28. $\$150 - \$30 = \$120$
 $\$120 \div 2 = \60
 $\$60 + \$30 = \$90$
 $\$90 : \60
 $3 : 2$
29. $\frac{2 \times 3}{3 \times 3} \frac{6}{9} = \frac{3 \times 2}{4 \times 2} \frac{6}{8}$
 $9 : 8$
30. $360^\circ - 195^\circ = 165^\circ$
 $165^\circ - 90^\circ = 75^\circ$
 $3u = 75^\circ$
 $1u = 25^\circ$
31. $\angle x = 180^\circ - (70^\circ + 35^\circ)$
 $= 75^\circ$
32. $11 \div 2 = 5 \text{ r}1$
 $4 \div 2 = 2$
 $7 \div 2 = 3 \text{ r}1$
 $5 \times 2 \times 3 = 30$
33. $82 \times 5 = 410$
 $410 - 200 = 210\text{kg}$
 $5 - 2 = 3$
 $210 \div 3 = 70\text{kg}$
34. $32 + 4 = 36$
 $5 + 4 = 9$
 $36 : 9$
 $\underline{4} : 1$
 4 years
35. $\frac{1}{2} \times 10 \times 10 = 50\text{cm}^2$
 $50 - (3 \times 3) = 50 - 9$
 $= 41\text{cm}^2$
36. $\$15 \times 5 = \75
 $\$100 - \$75 = \underline{\$25}$
 He get **\\$25** changed
37. $512 \div 32 = 16$
 $\$12.50 \times 16 = \underline{\$200}$
 She earned **\\$200**
38. $4u = \$560 + \80
 $= \$640$
 $3u = \$240$
 $\$(240 - 80) = \underline{\$160}$
 Claire has **\\$160** originally
39. Area of $\Delta = \frac{1}{2} \times 10 \times 20 = 100$
 $20 \times 15 = 300\text{cm}^2$
 $300 + 100 = 400\text{cm}^2$
 $400 - 30 = \underline{\mathbf{364\text{cm}^2}}$
 The whole area field is **364cm²**

40. $\angle a = 180^\circ - 90^\circ - 60^\circ$
 $= \underline{60^\circ}$

41. $5u = 25$
 $9u = \underline{45\ell}$
The capacity of the container is 45ℓ

42. $\square CAB = 64^\circ$ (vert. opp \sphericalangle)

43. A : B : C
1 : 2 : 4
3 : 6 : 12

$5u = 60$
 $6u = 72$
Bala has 72 sweets at first

44. $4u = 24$
 $7u = 42$
 $42 \div 2 = 14$
The average age of the 3 boys is 14

45. $(45 - 9) \div 2$
 $= 18$
 $18 + 9 = 27$
 $27 \div 3 = 9$
 $30 - 3 = 21$
 $21 + 18 = 39$
John read 39 books in 2 months

46a. $\frac{40}{100} \times 60 = 24\%$

$100\% = \$3000$
 $24\% = \$720$

He spend \$720 on rent

46b. $(100 - 40 - 24)\% = 36\%$
He saved 36% of his monthly salary.

$$\begin{aligned}
 47a. \quad \angle CBA &= 60^\circ \text{ (alt. } \sphericalangle \text{)} \\
 \angle CBE &= 180^\circ - (87^\circ + 35^\circ) \\
 &= 58^\circ
 \end{aligned}$$

$$\begin{aligned}
 47b. \quad 180^\circ - 60^\circ &= 120^\circ \\
 \angle DCE &= 180^\circ - (120^\circ + 35^\circ) \\
 &= 25^\circ
 \end{aligned}$$

$$\begin{aligned}
 47c. \quad \angle DFA &= 180^\circ - 105^\circ = 75^\circ \\
 \angle DAE &= 180^\circ - (75^\circ + 50^\circ) \\
 &= 55^\circ
 \end{aligned}$$

$$\begin{array}{ll}
 48. \quad 10 \text{ mins} = 1 \text{ tank} & 8 \text{ mins} = 1 \text{ tank} \\
 1 \text{ min} = \frac{1}{10} & 1 \text{ min} = \frac{1}{8}
 \end{array}$$

$$\begin{aligned}
 \frac{1}{8} - \frac{1}{10} &= \frac{10}{80} - \frac{8}{80} \\
 &= \frac{1}{40}
 \end{aligned}$$

$$30 \times 8 \times 20 = 4800\text{cm}^3$$

$$1 \text{ min} = 4800 \div 40 = \underline{\underline{120\text{cm}^3}}$$