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# 6B WORKBOOK 2

New Syllabus

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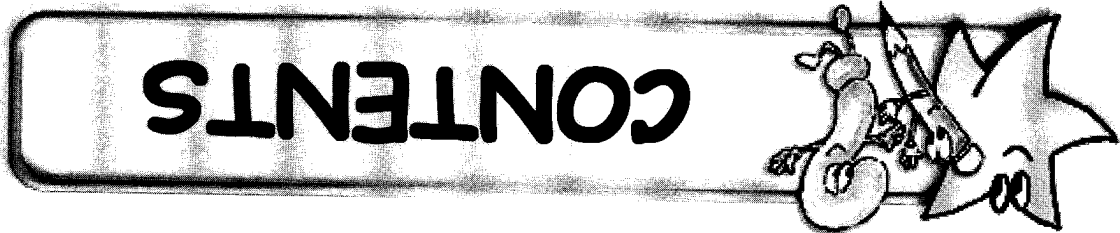
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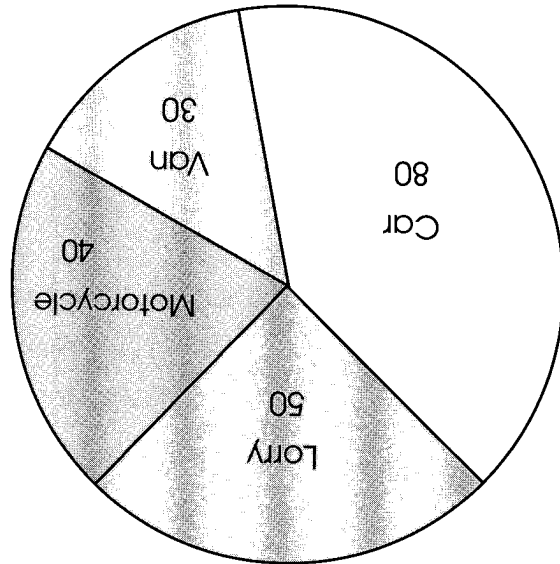


# 10 Pie Charts

## WORK SHEET 27

### Pie Charts

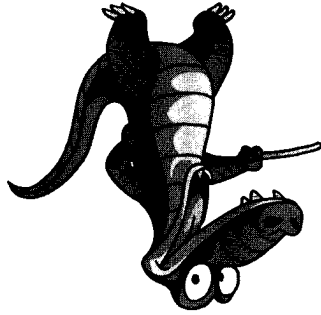
1. There are different types of vehicle parked in a car park. The pie chart shows the number of vehicles of each type.



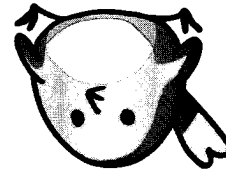
(a) How many vans are there in the carpark?

(b) Which type of vehicles has the greatest number?

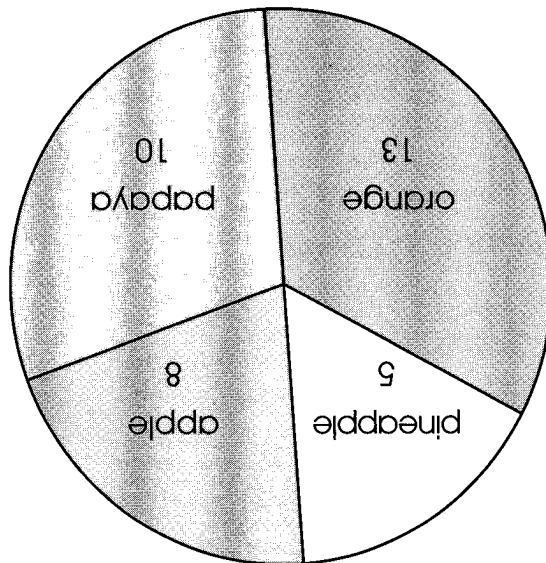
(c) Are there more motorcycles or lorries in the car park?



Date:

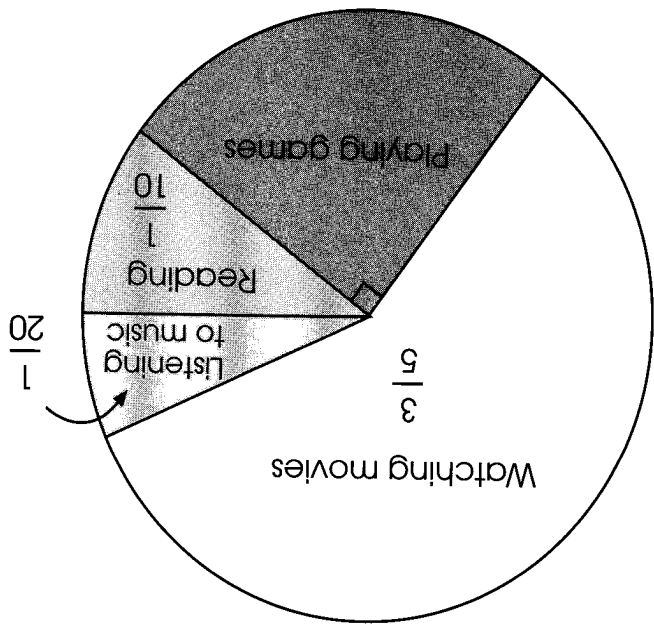


- (a) How many pupils chose papaya as the fruit they liked best?  
(b) Which fruit was the most popular?  
(c) Which fruit was more popular, apple or pineapple?



2. Pupils in a class were asked to pick the fruit they liked best among the four fruits given. The pie chart below shows the results.

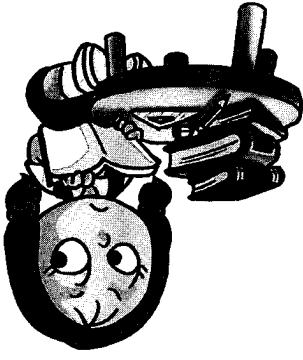
3. The pie chart shows the hobbies listed by a group of pupils.



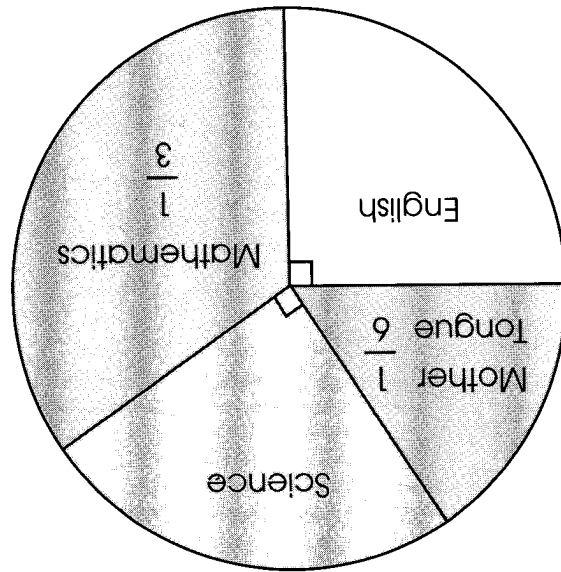
(a) Which hobby is the most popular?

(b) What fraction of the pupils like reading?

(c) Which hobby is more popular, playing games or reading?



4. The pupils in a class were asked to name their favourite subject. The pie chart represents their choices.

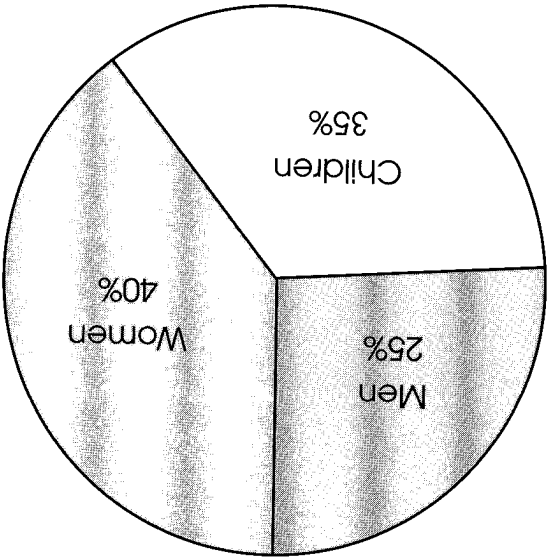


- (a) What fraction of the pupils liked Mathematics?  
(b) What fraction of the pupils liked English?  
(c) Which subject was more popular, Science or Mother Tongue?





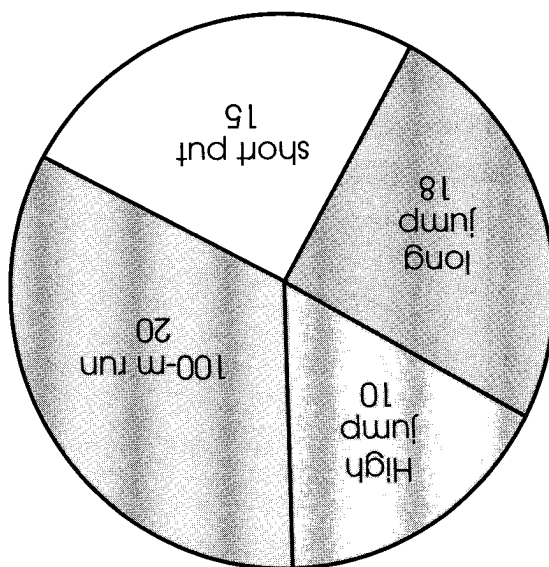
- (a) What percentage of the audience were children?
- (b) What percentage of the audience were women?
- (c) Were there more children or men in the theatre?
- (d) Were there more men or women in the theatre?



5. The pie chart shows the percentage of the different audience in a theatre.



- (a) How many more pupils took part in long jump than in high jump?  
 (b) What was the total number of pupils that took part in short put and 100-m run?  
 (c) How many pupils in total took part in the 4 events?



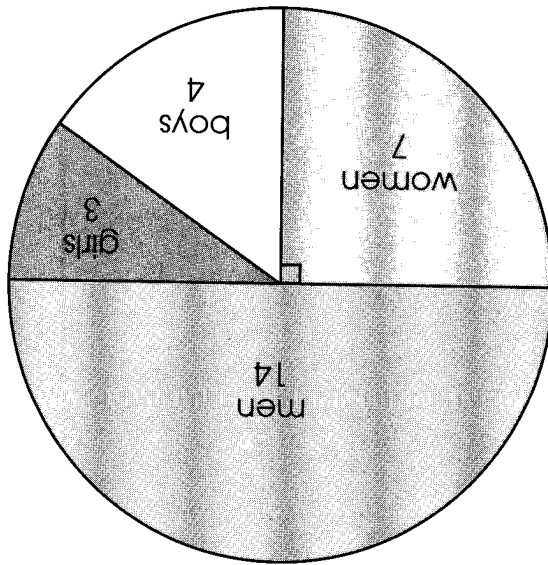
1. The pie chart shows the number of participants in 4 events for Hillview Primary's annual sports day.

**Word Problems**

**WORK Sheet 28**

Date:

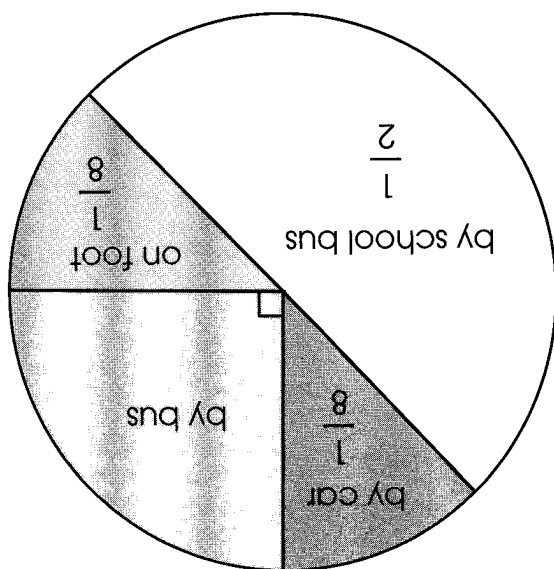
2. The pie chart shows the number of patients at a private clinic on a particular day.



- (a) How many patients were children?
- (b) How many adults were at the clinic?
- (c) What was the total number of patients at the clinic?
- (d) What fraction of the patients were men?

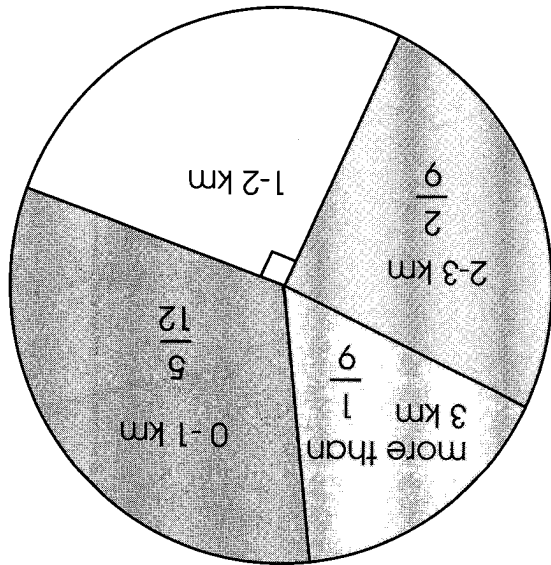


3. The pie chart shows how 400 pupils go to school.



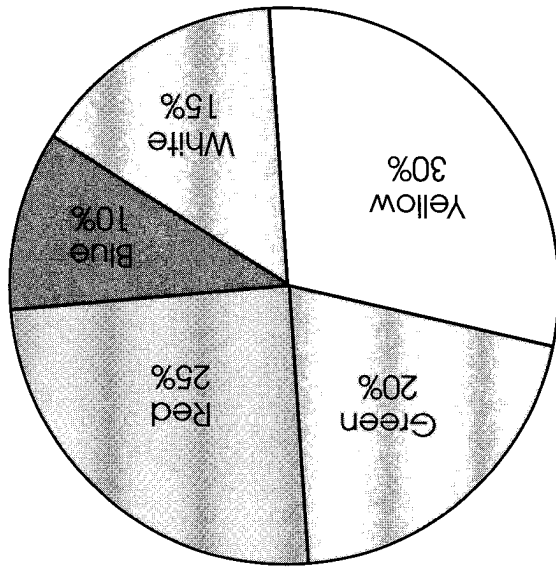
- (a) What percentage of the pupils walk to school?  
 (b) What fraction of the pupils do not walk to school?  
 (c) How many of the pupils go to school by school bus?

4. The pie chart below shows how far away the pupils in a class live from the school. There are 4 pupils living more than 3 km away from the school.



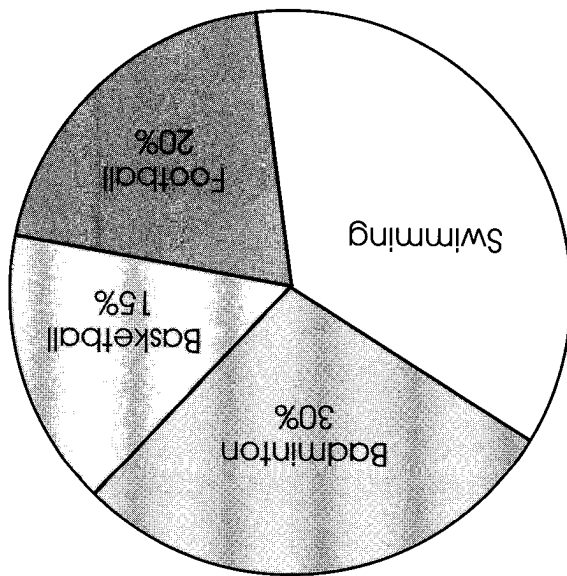
- (a) What percentage of the pupils live 1-2 km away from the school?
- (b) What fraction of pupils live more than 1 km away from the school?
- (c) How many pupils are there altogether in the class?

5. The pie chart shows the percentage of different colours of 40 marbles that John has.



- (a) What percentage of the marbles are green and red?  
(b) What percentage of the marbles are not white?  
(c) How many white marbles does he have?

6. A group of pupils were asked to name their favourite sport in a survey. 60 pupils chose badminton. The pie chart represents their choices.

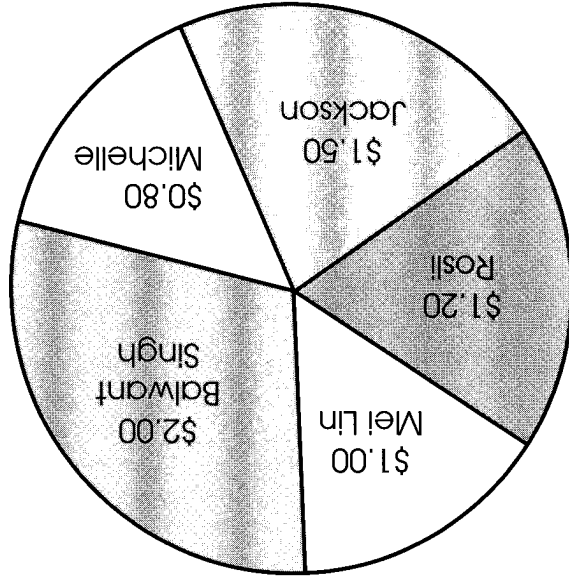


- (a) What percentage of the pupils chose basketball and football?  
(b) What percentage of the pupils chose swimming?  
(c) How many pupils took part in the survey?





- (a) Who had the least pocket money?  
 (b) How many times was Balwant Singh's pocket money as much as Mei Lin's?  
 (c) How much more pocket money did Jackson get than Rosli?

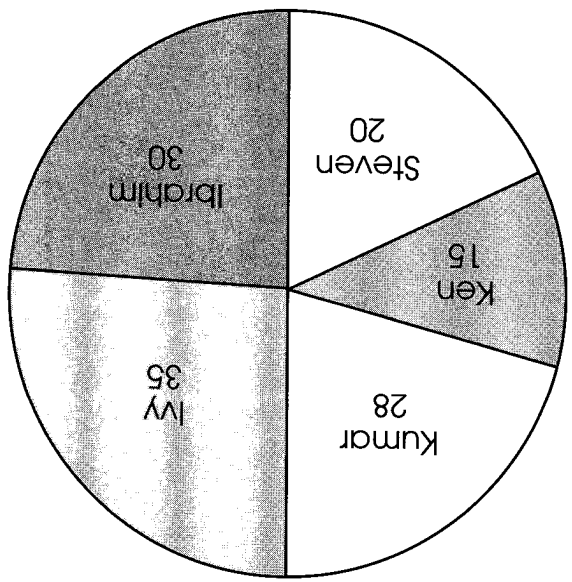


1. The pie chart below shows the pocket money that 5 pupils had on a particular day.

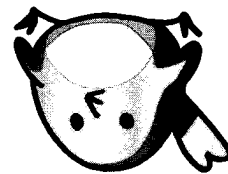
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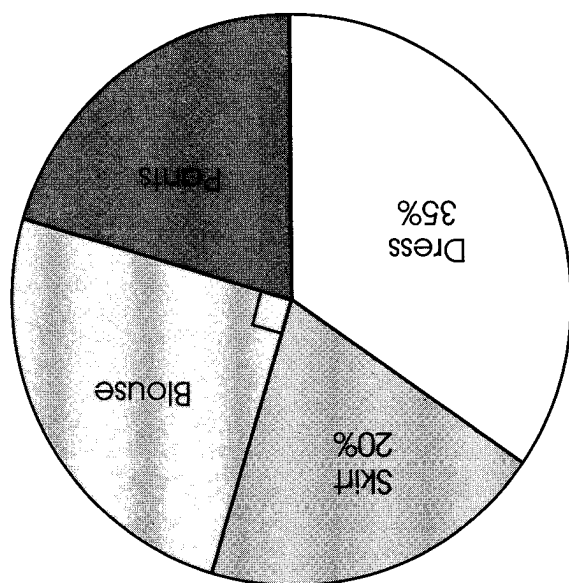
2. The pie chart shows the number of story books owned by 5 pupils.



- (a) Who owns the most number of story books among the 5 pupils?
- (b) How many books in total do the 5 pupils own?
- (c) What fraction of the books does Kumar own?

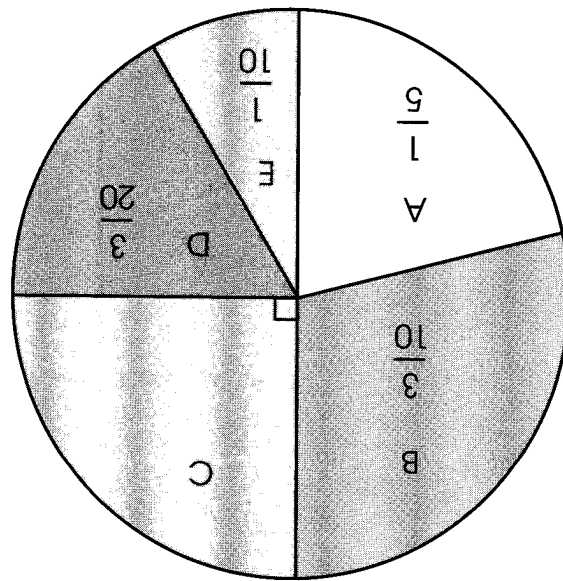


- (a) What percentage of the money was spent on the blouse?  
(b) What percentage of the money was spent on the pants?  
(c) What did Mrs Chen spend the most money on?  
(d) How much did she spend altogether?

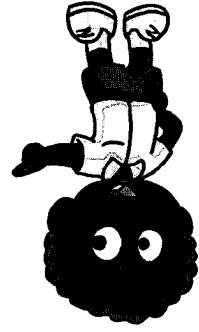


3. Mrs Chen spent some money on clothes. The pie chart shows how the money was spent. She spent \$25 on a skirt.

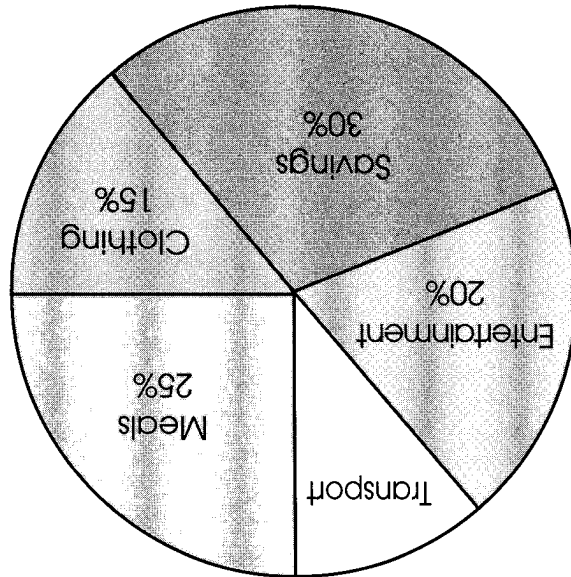
4. The pie chart below shows the grades obtained by a class of 40 pupils in a Mathematics test.



- (a) What percentage of pupils scored grade A in the Mathematics test?
- (b) If grade D and grade E were considered failed, what fraction of the pupils failed this test?
- (c) How many pupils scored grade B?

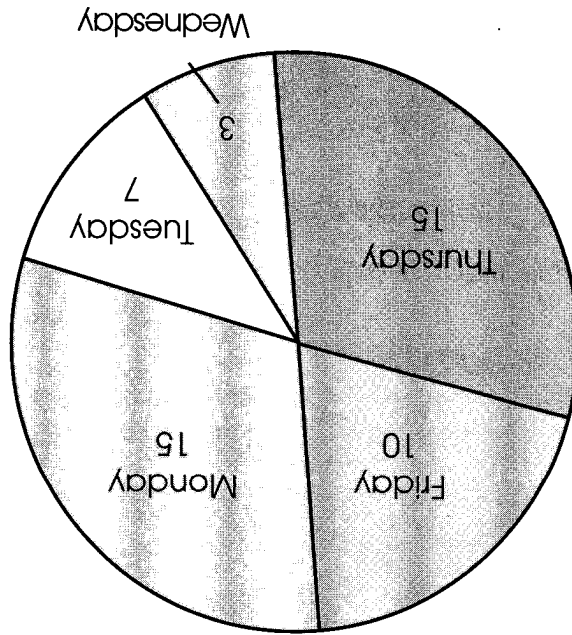


5. The pie chart below shows how Mr Lee spends his monthly salary. His monthly salary is \$1800.



- (a) What percentage of his monthly salary does Mr Lee spend on meals and on clothing?  
 (b) What percentage of his monthly salary does Mr Lee spend on transport?  
 (c) How much money does he save each month?

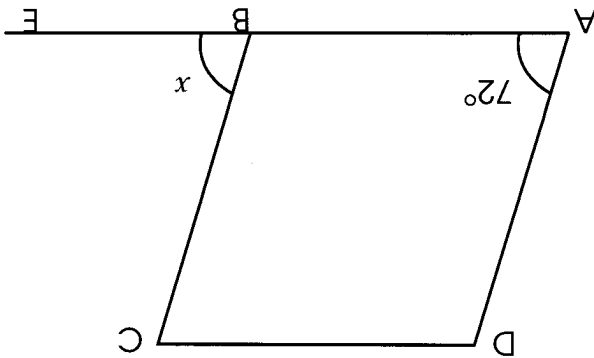
6. The pie chart below shows the number of pupils who were late for school on a particular week.



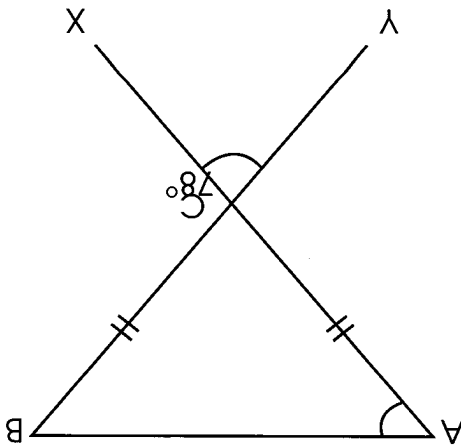
(a) On which day(s) did the school have the most number of late comers?

(b) How many more pupils were late on Thursday than on Friday?

(c) How many pupils were late in total for the week?



2. ABCD is a parallelogram and ABE is a straight line.  $\angle DAB = 72^\circ$ . Find  $\angle x$ .



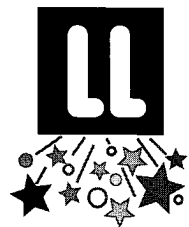
1. In the figure, ACX and BCY are straight lines.  $AC = BC$ ,  $\angle XCY = 78^\circ$ . Find  $\angle CAB$ .
- In each of the following questions, the figure is not drawn to scale.

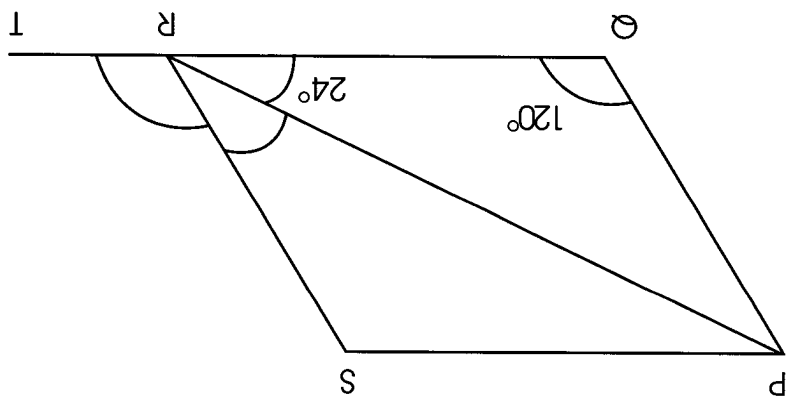
## Angles in Geometric Figures

### WORK SHEET 29

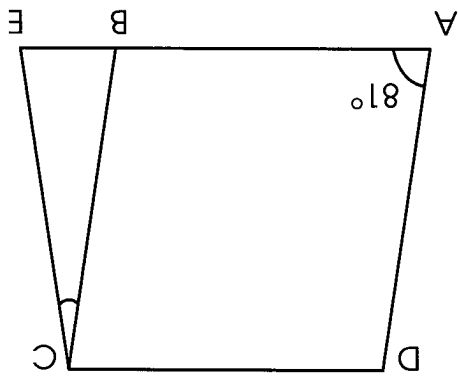
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## Angles in Geometric Figures



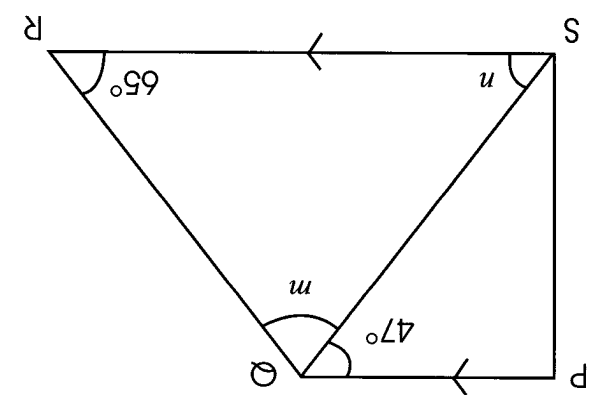
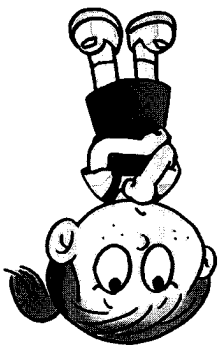


3. In the figure,  $QRT$  is a straight line and  $PQRS$  is a parallelogram. Find  $\angle PRS$  and  $\angle SRT$ .



4. In the figure, ABCD is a rhombus, BCE is an isosceles triangle and ABE is a straight line. Find  $\angle BCE$ .

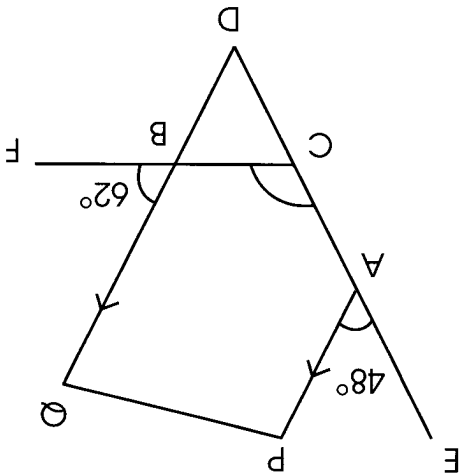


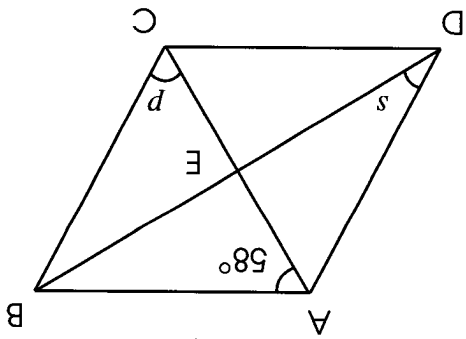


5.  $PQRS$  is a trapezium. Find  $\angle m$  and  $\angle n$ .

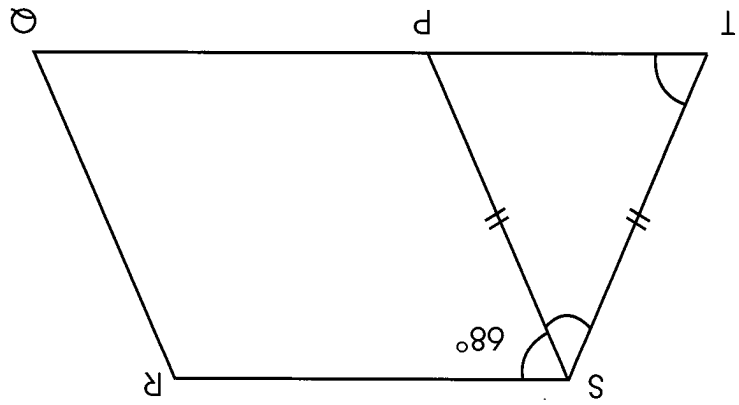


6. In the figure,  $EACD$  and  $DBQ$  are straight lines and  $ADQP$  is a trapezium. Find  $\angle ACB$ .

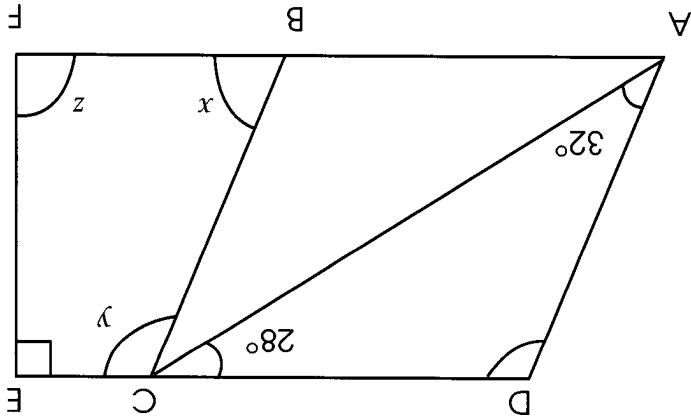




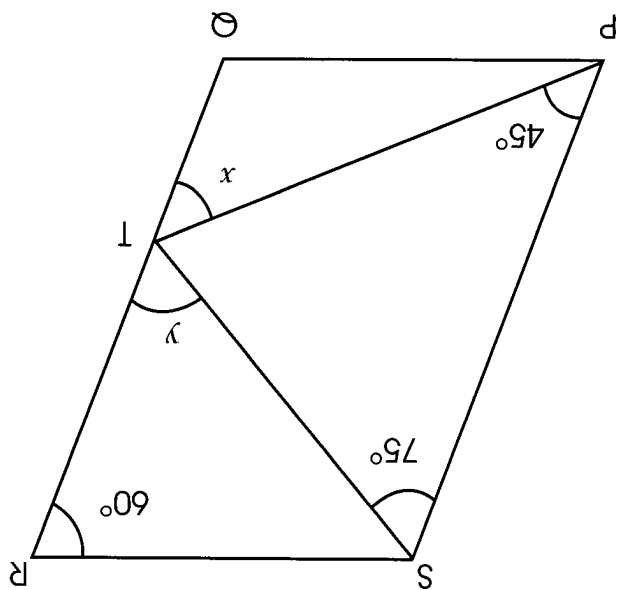
7. In the figure,  $ABCD$  is a rhombus and  $\angle BAC = 58^\circ$ . Find  $\angle p$  and  $\angle s$ .



8. In the figure, PQRS is a parallelogram,  $\angle RSP = 68^\circ$ ,  $SP = ST$  and TPQ is a straight line. Find  $\angle STP$  and  $\angle TSP$ .

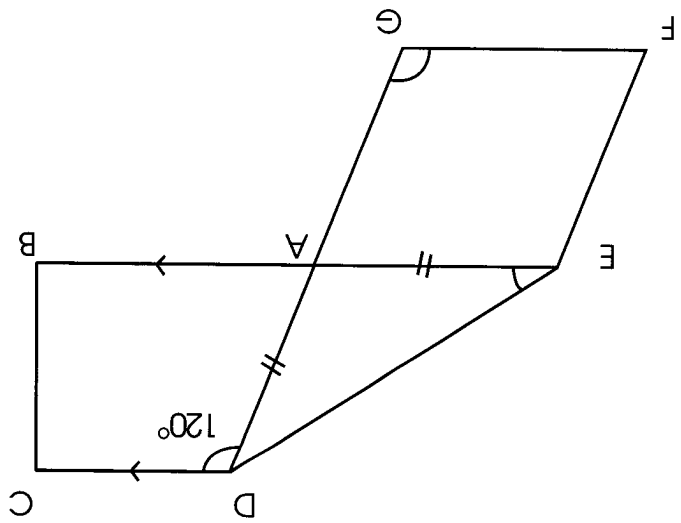


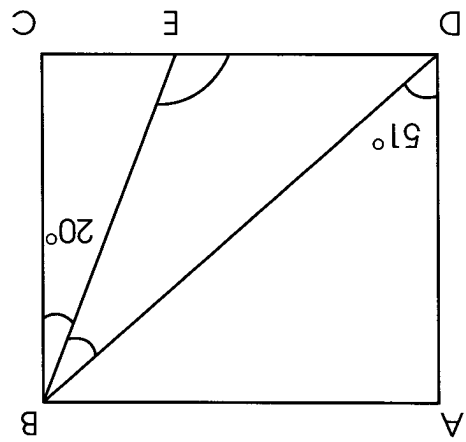
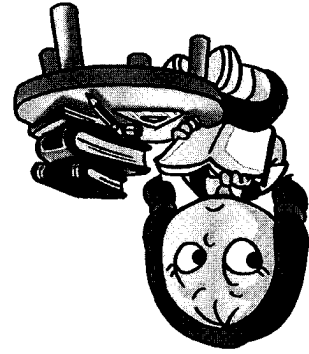
9. In the figure,  $ABCD$  is a parallelogram,  $BCEF$  is a trapezium,  $\angle CEF$  is a right angle and  $DCE$  and  $ABF$  are straight lines. Find  $\angle x$ ,  $\angle y$  and  $\angle z$ .



10. PQRS is a parallelogram. Find  $\angle x$  and  $\angle y$ .

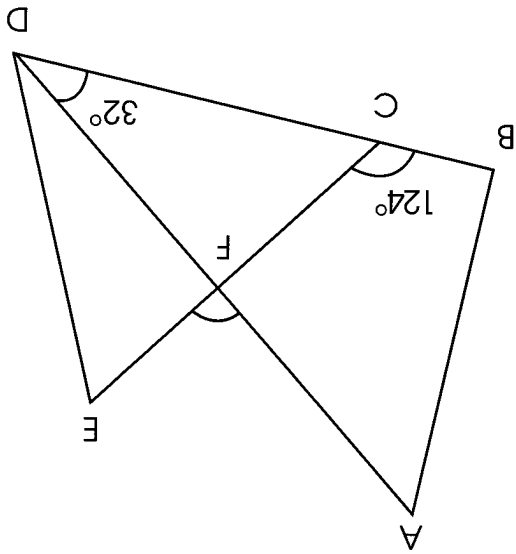
11. In the figure,  $ABCD$  is a trapezium and  $AEEG$  is a parallelogram.  $AD = AE$  and  $EAB$  and  $DAG$  are straight lines. Find  $\angle AED$  and  $\angle AGF$ .





12. In the figure, ABCD is a rectangle,  $\angle EBC = 20^\circ$  and  $\angle ADB = 51^\circ$ . Find  $\angle DBE$  and  $\angle BED$ .

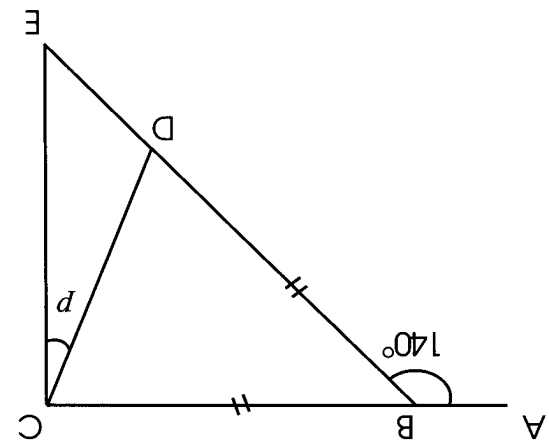




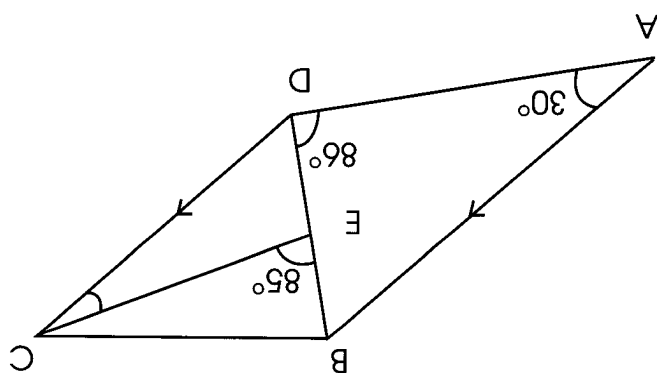
- In each of the following questions, the figure is not drawn to scale.
1. In the figure,  $BCD$ ,  $AFD$  and  $CFE$  are straight lines.  $\angle BCF = 124^\circ$  and  $\angle CDF = 32^\circ$ . Find  $\angle AFE$ .



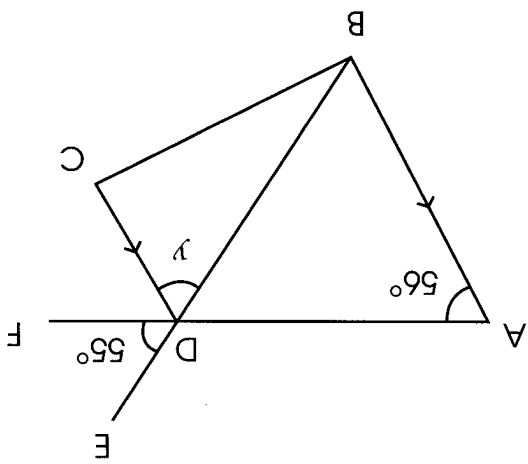
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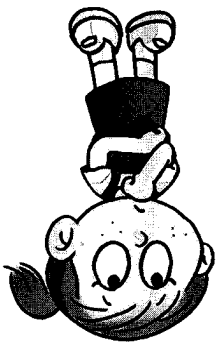
2. In the figure,  $ABC$  is a straight line and  $BC = BD$ ,  $\angle BCE$  is a right angle. Find  $\angle d$ .



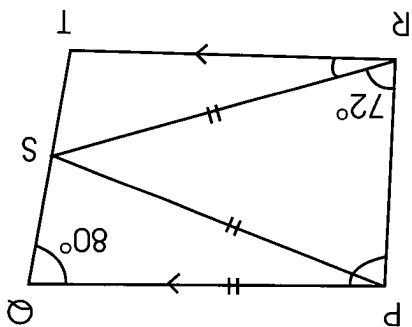
3. In the figure, ABCD is a trapezium. BE is a straight line.  $\angle BEC = 85^\circ$ ,  $\angle BAD = 30^\circ$  and  $\angle ADB = 86^\circ$ . Find  $\angle ECD$ .



4. In the figure,  $ABCD$  is a trapezium.  $BDE$  and  $ADF$  are straight lines. Find  $\angle y$ .



5. In the figure,  $PQTR$  is a trapezium.  $ST$  is a straight line.  $PQ = PS = SR$ ,  $\angle PQS = 80^\circ$  and  $\angle PRS = 72^\circ$ . Find



- (a)  $\angle RPQ$ ,  
 (b)  $\angle SRT$ .

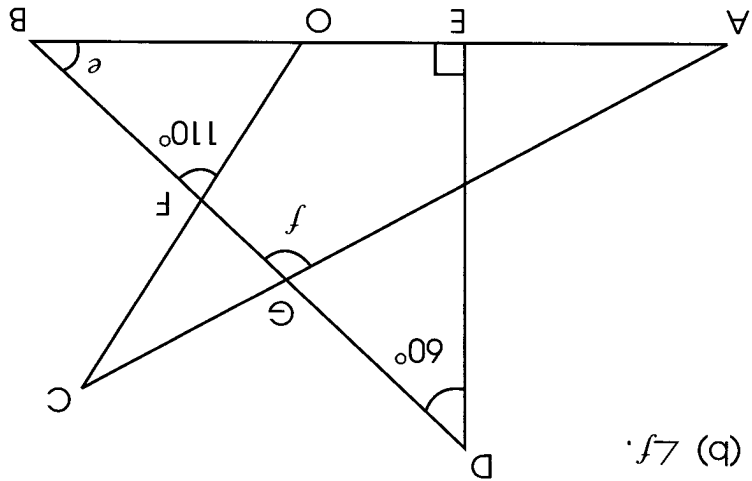


6. In the figure,  $\angle DEB$  is a right angle,  $\angle AEOB$ ,  $\angle DGF$ ,  $\angle AGC$  and  $\angle OFC$  are straight lines and  $OA = OC$ .

Find

(a)  $\angle e$ ,

(b)  $\angle f$ .





**12**

# Problem-Solving Processes and Strategies

## WORK SHEET 30

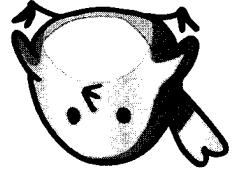
Date:

### Problem-Solving Processes

Follow the 4-step problem-solving process you have learnt to solve the following problems. Write down the steps clearly.

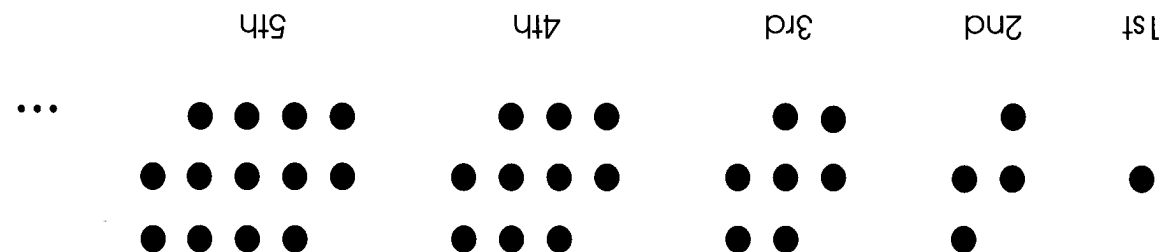
1. The ratio of the amount of money Peter had to that John had was 1:3. After Peter got an additional \$30 and John spent \$2, they had the same amount of money. How much money did Peter have at first?





2. The average mass of 3 boys is 45.2 kg and the average mass of 4 girls is 40.8 kg. When one of the girls joins the group of boys, the average mass of the 3 boys and the girl is 44.6 kg. What is the average mass of the remaining 3 girls? Give your answer correct to 1 decimal place.





each figure.)  
 (Hint: From the 2nd figure onwards, find the number of dots in each row of 50th figure?)

1. Study the following sequence of figures. How many dots are there in the following problems. Use suitable strategies to solve the following problems.

## Problem-Solving Strategies

### WORK SHEET 31

Date:



2. There are 3 different numbers. The sum of the numbers is 19. The greatest number is equal to the product of the other two numbers. What is the smallest number?

3. John had 3 times as many cards as his brother. After John gave 15 cards to his brother, he had 36 cards more than his brother. How many cards did John have at first?

4. An old man gave  $\frac{2}{1}$  of the number of horses he had to his oldest son,  $\frac{3}{1}$  of the remaining to his second son, then  $\frac{4}{1}$  of the remaining to his third son and finally, the rest of the 6 horses to his fourth son. How many horses did the old man have?

Calculator is **not** allowed for this whole revision.

**Section A**

For each question, four options are given.  
One of them is the correct answer.

1. Four hundred thousand three hundred and six in numerals is \_\_\_\_\_ .
- (1) 4306  
 (2) 40 306  
 (3) 400 306  
 (4) 400 360
- ( ) ( )

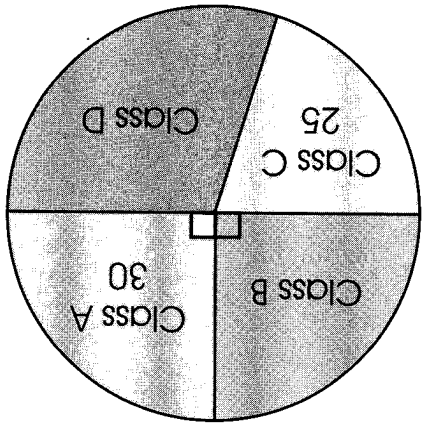
2. Find the value of  $200 \times \frac{5}{3}$ .
- (1) 600  
 (2) 120  
 (3) 40  
 (4) 12
- ( ) ( )

3. Rosli spent \$5 from his savings of \$20. What percentage of his savings was spent?
- (1) 5%  
 (2) 10%  
 (3) 20%  
 (4) 25%
- ( ) ( )

- (1) 14
  - (2) 64
  - (3) 124
  - (4) 248
- ( ) ( )

5. Find the value of  $60 + 2 \times 12 \div 6$ .

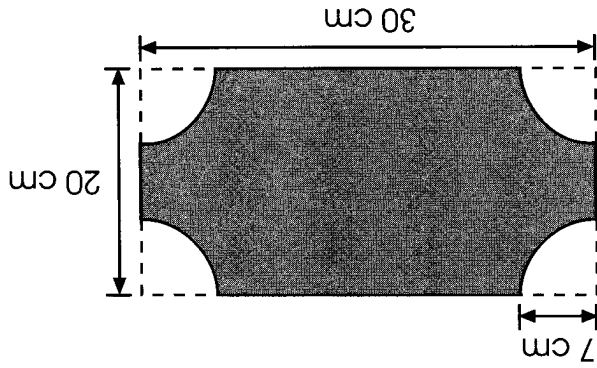
- (1) 25 pupils
  - (2) 30 pupils
  - (3) 35 pupils
  - (4) 55 pupils
- ( ) ( )



4. The pie chart shows the number of pupils in four classes. How many pupils are there in Class D?

- (4) 88 cm  
 (3) 56 cm  
 (2) 54 cm  
 (1) 44 cm

(Take  $\pi = \frac{22}{7}$ )



8. In the figure below, four quarter-circles of radius 7 cm each were cut out from the four corners of a rectangle with length 30 cm and width 20 cm. Find the perimeter of the remaining figure.

largest angle?

7. The angles of a triangle are in the ratio of 3 : 2 : 1. What is the size of the

- (4) 120°  
 (3) 100°  
 (2) 90°  
 (1) 60°

6. Which one of the following fractions is not equivalent to  $\frac{3}{4}$ ?

- (4)  $\frac{16}{12}$   
 (3)  $\frac{12}{9}$   
 (2)  $\frac{8}{6}$   
 (1)  $\frac{6}{5}$

( )

( )

( )

9. The length of the side of a square is  $(x + 3)$  cm. Find its perimeter.

(1)  $4x + 12$

(2)  $4x + 3$

(3)  $x + 12$

(4)  $4x$

( )

10. Mr Lee paid his parking fee at a car park at 11.15 a.m. He was charged a parking fee for  $2\frac{1}{2}$  hours. At what time did Mr Lee park his car in the car park?

(1) 10.00 a.m.

(2) 9.45 a.m.

(3) 9.15 a.m.

(4) 8.45 a.m.

( )

statements is incorrect?

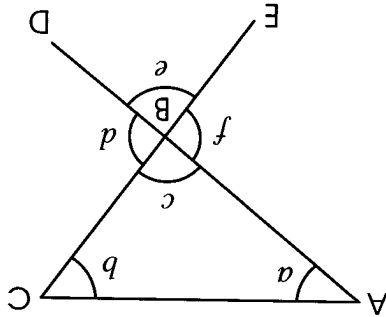
(1)  $\angle a + \angle b + \angle c = 180^\circ$

(2)  $\angle c + \angle f = 180^\circ$

(3)  $\angle c + \angle d + \angle e + \angle f = 360^\circ$

(4)  $\angle a + \angle b + \angle c + \angle d = 360^\circ$

( )



11. In the figure, ABD and CBE are straight lines. Which one of the following

- (1) 21: 8  
 (2) 21: 5  
 (3) 9: 4  
 (4) 18: 5
- ( ) ( )

15. This year, Mr George is 36 years old. His son, Sunny, is 10 years old. Find the ratio of Mr George's age to Sunny's age in 6 years' time.

- (1) \$100  
 (2) \$120  
 (3) \$150  
 (4) \$600
- ( ) ( )

14. If 5 pens cost \$30, find the cost of 20 pens.

- (1) 0.07, 0.11, 0.15  
 (2) 0.53, 0.57, 0.55  
 (3) 0.88, 0.68, 0.78  
 (4) 0.18, 0.15, 0.12
- ( ) ( )

13. Which of the following sets of numbers is arranged in descending order?

- (1) 3105  
 (2) 3100  
 (3) 3080  
 (4) 3000
- ( ) ( )

12. The product  $41 \times 75$  when rounded to the nearest hundred is \_\_\_\_\_.



\_\_\_\_\_ Ans:

18. Find the missing value in the box.  
 $1\ 437\ 509 = 1\ 407\ 509 +$

\_\_\_\_\_ Ans:

17. Find the value of  
 $\frac{1}{5} \div \frac{3}{6}$

\_\_\_\_\_ Ans:

16. Express  $\frac{5}{8}$  as a decimal.

**Section B**  
 Answer the following questions.

19. Round off 175 640 to the nearest thousand.

20. Find the value of  $2100 \div 60$ .

Ans: \_\_\_\_\_

21. How many rectangles measuring 6 cm by 4 cm can be cut out from a square of side of length 12 cm?

Ans: \_\_\_\_\_

Ans: \_\_\_\_\_

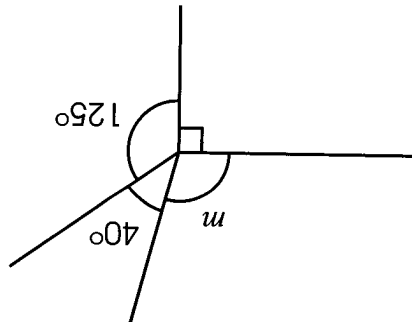
Ans: \_\_\_\_\_

24. Divide 85 by 7. Find the remainder.

Ans: \_\_\_\_\_ years old

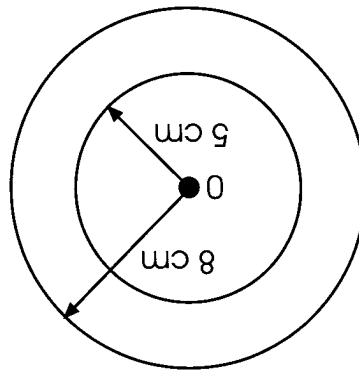
23. Aini is 9 years old, Gita is 10 years old and Pearl is 14 years old. Find their average age.

Ans: \_\_\_\_\_



22. The figure is not drawn to scale. Find  $\angle m$ .

- 25.** The figure shows 2 circles both with the centre O. The radius of the bigger circle is 8 cm and the radius of smaller circle is 5 cm. Find the ratio of the circumference of the bigger circle to the circumference of the smaller circle.



- 26.** Mr Tan has 6 kg of flour. He wants to put the flour into smaller packets of  $\frac{3}{4}$  kg each. How many packets are there?

Ans: \_\_\_\_\_

- 27.** There are 20 seats in the room. 16 seats are occupied. Find the percentage of the seats not occupied.

Ans: \_\_\_\_\_

\_\_\_\_\_ Ans:

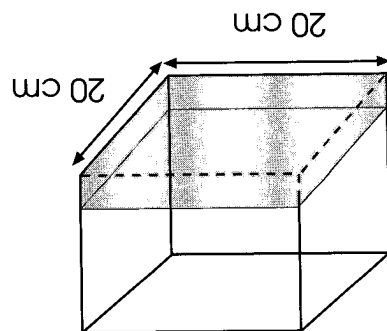
**30.** The average speed of a boat is 24 km/h. What is the distance the boat covered in 3 hours?

\_\_\_\_\_ Ans:

**29.** You are facing East. If you turn  $135^\circ$  clockwise, what direction will you be facing?

\_\_\_\_\_ Ans:

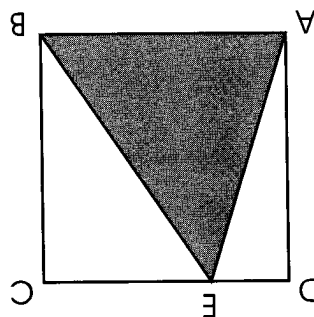
**28.** When  $y = 23$ , what is the value of  $\frac{3}{2} \times (y + 3)$ ?



Ans: \_\_\_\_\_

33. A rectangular container with a square base of edge 20 cm is filled with  $\frac{2}{3}$  of water. Find the height of water level in the container.

Ans: \_\_\_\_\_



32. ABCD is a square of side 8 cm. What is the area of triangle ABE?

Ans: \_\_\_\_\_

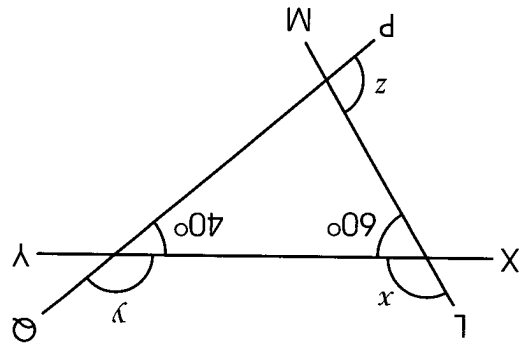
12, 20, 28, 36,

31. Find the next number in the following number pattern.

\_\_\_\_\_ Ans:

35. A bus left the bus station at 9.45 a.m. After travelling for 4 hours 30 minutes, it stopped at a rest area for  $\frac{1}{2}$  hour. It continued the journey for another 1 hour 40 minutes to reach the destination. Find the time of arrival.

\_\_\_\_\_ Ans:



34. The figure is not drawn to scale. XY, PQ and LM are straight lines. Find  $\angle x + \angle y + \angle z$ .

## Section C

For questions 36 to 50, show your working clearly in the space below each question and write your answers in the spaces provided.

36. Tim and his sister, Pat, both received the same amount of pocket money on Monday. Pat managed to save  $\frac{2}{3}$  of her pocket money on that day. After spending  $\frac{5}{3}$  of his pocket money, Tim managed to save 60 cents.
- (a) How much pocket money did each receive on Monday?  
 (a) How much pocket money did Pat spend on Monday?

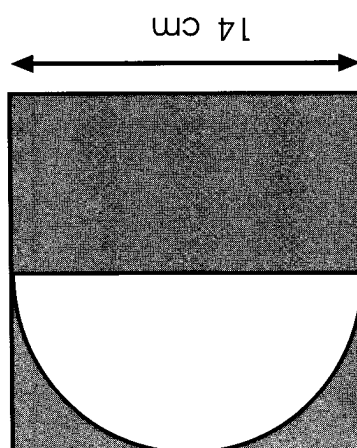
Ans: (a)

(b)



- 37.** Adnan is taller than Jimmy by 5 cm but shorter than Boon-tee by 2 cm.  
(a) How much taller is Boon-tee than Jimmy?  
(b) If Jimmy is 125 cm tall, what is the average height of Adnan, Jimmy and Boon-tee?

Ans: (a) \_\_\_\_\_  
(b) \_\_\_\_\_

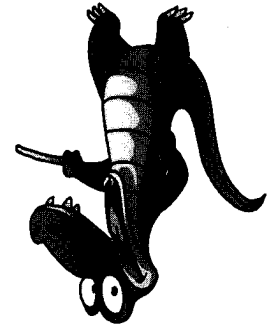


$$\left(\text{Take } \pi = \frac{22}{7}\right)$$

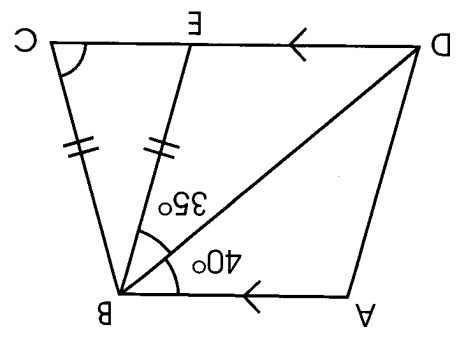
area of the shaded figure.

**38.** The following figure shows a semicircle in a square of side 14 cm. Find the

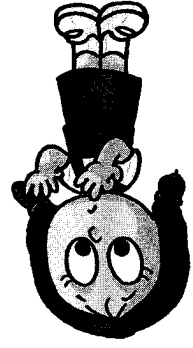
Ans: \_\_\_\_\_



Ans: \_\_\_\_\_



39. The figure is not drawn to scale. ABCD is a trapezium. DEC is a straight line. BE = BC,  $\angle ABD = 40^\circ$  and  $\angle DBE = 35^\circ$ . Find  $\angle BCE$ .



40. In a coin box, the number of 20¢ coins is 3 times as many as the number of 10¢ coins. The total value of 10¢ coins is \$2.30. What is the total value of the 20¢ coins?

Ans: \_\_\_\_\_

- 41.** In a class, 20% of the pupils can swim. The number of pupils in the class who cannot swim is 24. Find
- (a) the number of pupils in the class and
  - (b) the number of pupils who can swim.

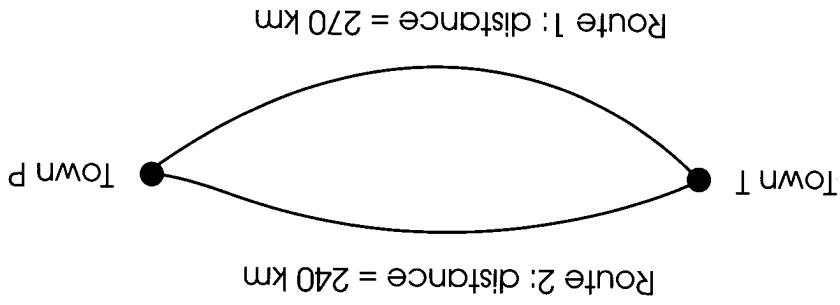
Ans: (a) \_\_\_\_\_  
(b) \_\_\_\_\_



- 42.** There are 20 apples in Basket A and 30 apples in Basket B. 4 apples are removed from Basket A. How many apples must be removed from Basket B so that the ratio of the number of apples in the 2 baskets remains the same as before?

Ans: \_\_\_\_\_

43. There are two routes connecting Town T to Town P as shown below. At 8.30 a.m., a car left Town T for Town P on Route 1. It travelled at an average speed of 90 km/h. At the same time, a motorcyclist left Town T for Town P on Route 2. The motorcyclist arrived at Town P at the same time as the car. Find the time of arrival for both the car and the motorcyclist at Town P.
- (b) Find the average speed of the motorcycle.



Ans: (a) \_\_\_\_\_  
 (b) \_\_\_\_\_

- 44.** Michael is  $x$  years old this year, John is 4 times as old as Michael, Michael is 5 years older than his sister, May.  
 (a) Express the sum of their ages in terms of  $x$ .  
 (b) If Michael is 7 years old now, find the age of John and the age of May three years from now.

Ans: (a)

(b) John :


May :



- 45.** Hamid and Joe both collect stamps. The ratio of the number of Hamid's stamps to the number of Joe's stamps is 7 : 8. Joe has 160 stamps.
- (a) Find the number of stamps collected by Hamid.
- (b) How many stamps should Joe give to Hamid so that both of them will have the same number of stamps?

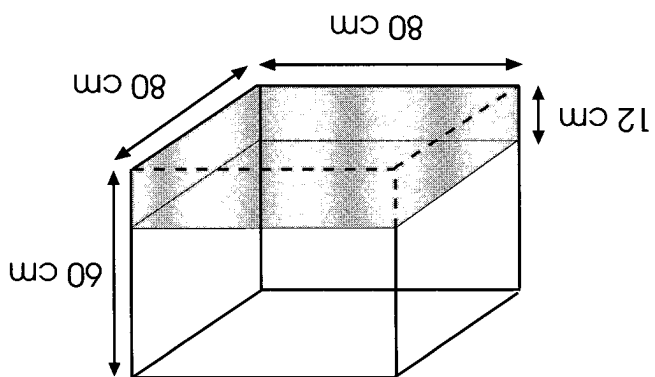
Ans: (a) \_\_\_\_\_

(b) \_\_\_\_\_

46.  A rectangular water tank has a square base of side 80 cm and height of 60 cm. The tank is used to collect rain water. During a drizzle, rain water

filled the tank to a height of 12 cm. Find

- (a) the capacity of the tank in litres,  
 (b) the volume of rain water collected in the tank in litres,  
 (c) the percentage of the tank filled with water.

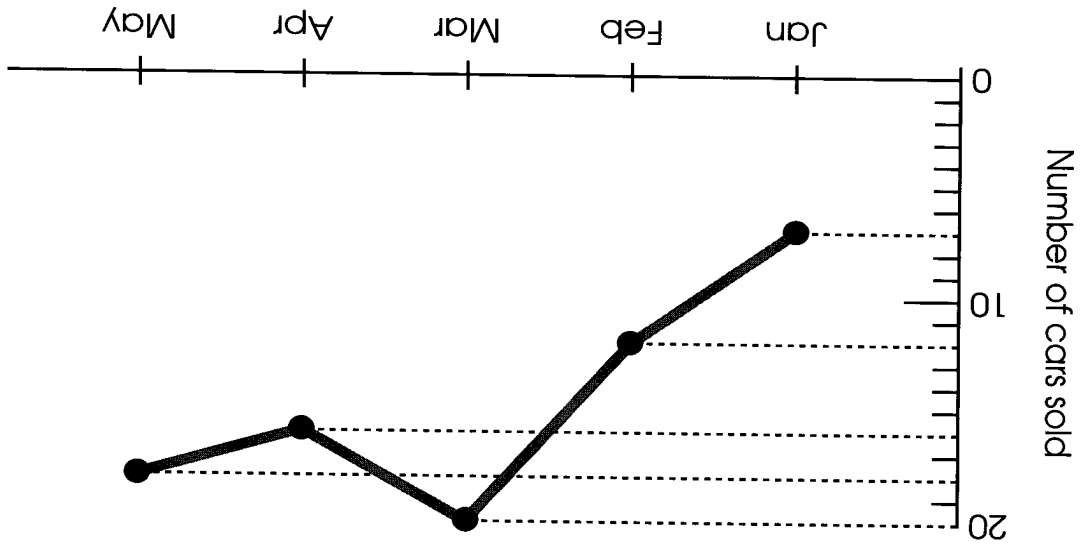


Ans: (a)

(b)

(c)

47. The line graph shows the number of cars sold by a motor company from Jan to May.
- In which month was the most number of cars sold?
  - In which month was the least number of cars sold?
  - How many cars were sold for this period?



Ans: (a) \_\_\_\_\_  
 (b) \_\_\_\_\_  
 (c) \_\_\_\_\_

48. There are 3 different sizes of flower pots sold in a shop. The table shows the prices of flower pots of the different sizes.

Size	Price
A	3 pots for \$5
B	3 pots for \$10
C	3 pots for \$20

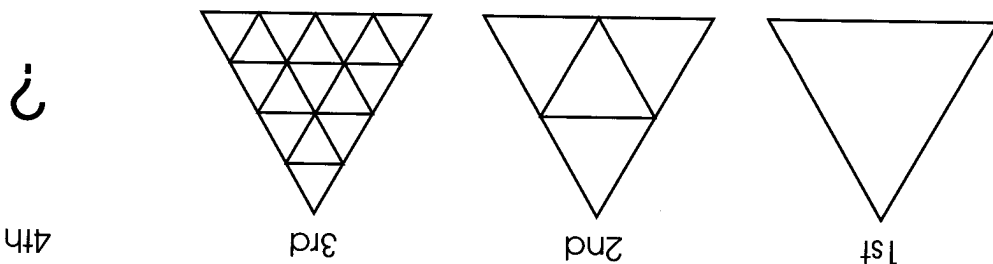


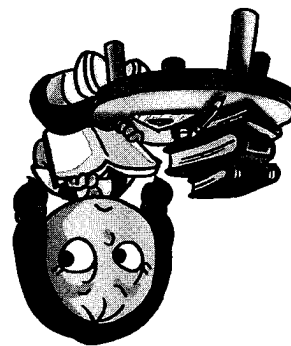
Mr Tee wants to buy 15 flower pots with \$50. List all the different ways that he can buy the flower pots.

\_\_\_\_\_ (b)  
 \_\_\_\_\_ (a) Ans:

$1, \frac{1}{4}, \frac{1}{16}, \dots$

- (b) Find the missing fraction in the following pattern.
- (a) Following this pattern, how many small equilateral triangles of the same size are there in the 4th figure?
- 1st : The pattern begins with an equilateral triangle.  
 2nd : The equilateral triangle is then divided into 4 equilateral triangles of the same size.  
 3rd : Each of the equilateral triangles is then divided again into 4 equilateral triangles. Thus there are 16 small equilateral triangles of the same size in the 3rd figure.





50. In a school's parade square, the ratio of the number of girls to the number of boys is 3 : 2. After 5 more boys join in, the ratio of the number of girls to the number of boys is 4 : 3. How many girls are there in the parade square?

Ans: \_\_\_\_\_

Calculator is allowed for this whole revision.

**Section A**

For each question, four options are given. Only one of them is the correct answer.

1. Find the value of  $3\frac{5}{8} + 1\frac{1}{6} - 2\frac{1}{2}$ .

(1)  $2\frac{24}{1}$

(2)  $2\frac{24}{7}$

(3)  $4\frac{24}{1}$

(4)  $4\frac{24}{7}$

( ) ( )

2. In 103.428, which digit is in the hundredths place?

(1) 1

(2) 2

(3) 8

(4) 4

( ) ( )

3. Round off the sum of 19 578 and 2883 to the nearest 1000.

(1) 22 000

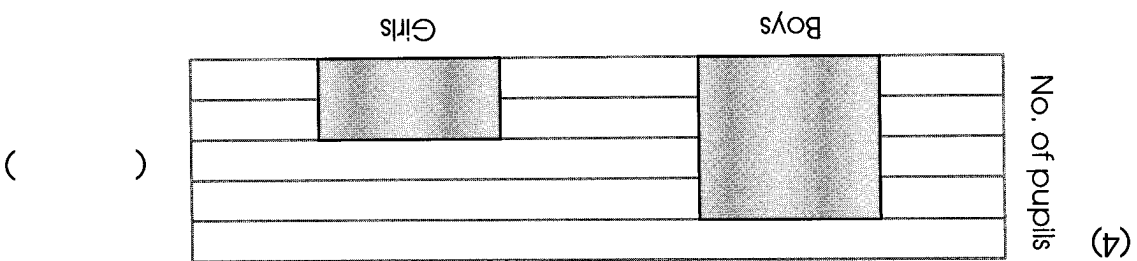
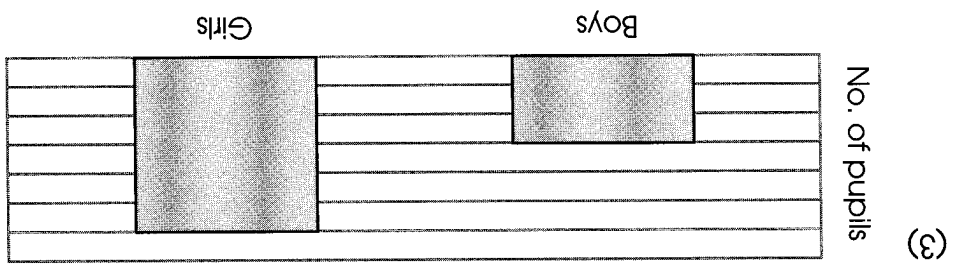
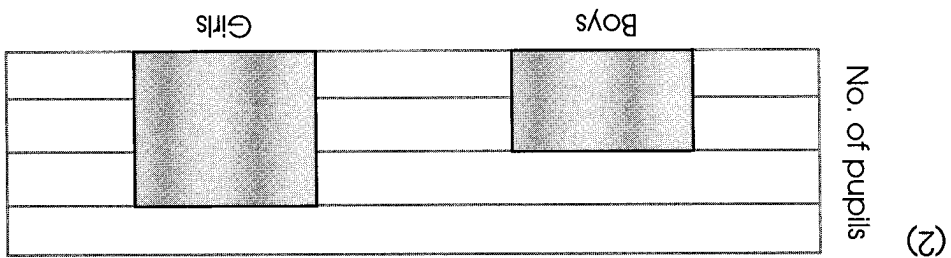
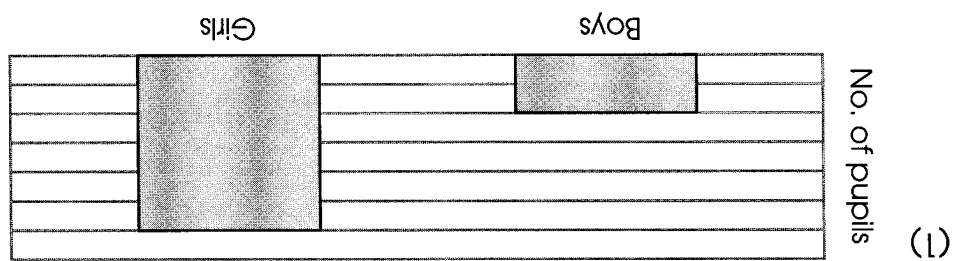
(2) 22 400

(3) 22 500

(4) 23 000

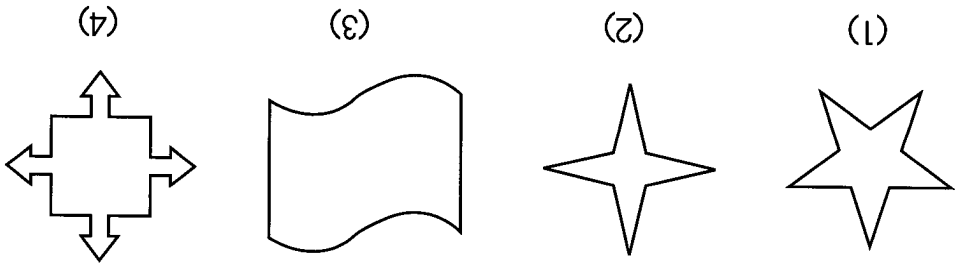
( ) ( )

4. The following graphs show the number of boys and girls in 4 different classes. In which class is the number of boys  $\frac{1}{2}$  of the number of girls?





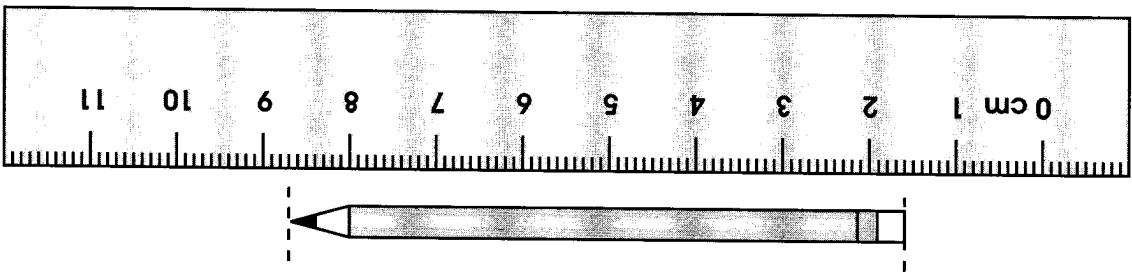
( )



6. Which one of the following is not a symmetric figure?

( )

- (1) 7.1 cm
- (2) 7.7 cm
- (3) 8.1 cm
- (4) 8.7 cm



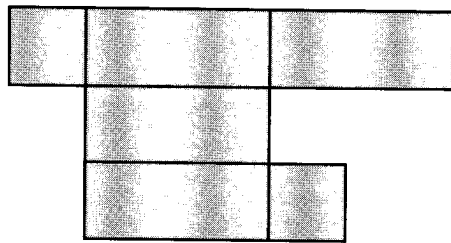
5. What is the length of the pencil?

9. The usual price of a printer was \$130. Mr Lee bought it at a discount of 15%. How much did he pay for it?
- (1) \$19.50  
 (2) \$97.50  
 (3) \$104.00  
 (4) \$110.50
- ( ) ( )

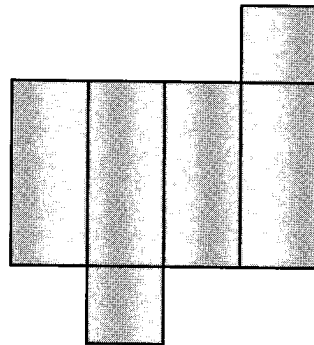
8. Peter left home at 12.45 p.m., and cycled to school at a speed of 12 km/h. The distance from his home to his school is 4 km. What time did Peter arrive at his school?
- (1) 1.15 p.m.  
 (2) 1.10 p.m.  
 (3) 1.05 p.m.  
 (4) 1.00 p.m.
- ( ) ( )

7.  $\frac{5}{9}$  of the pupils in a school are girls. There are 1080 boys. How many pupils are there in the school?
- (1) 480  
 (2) 600  
 (3) 1944  
 (4) 2430
- ( ) ( )

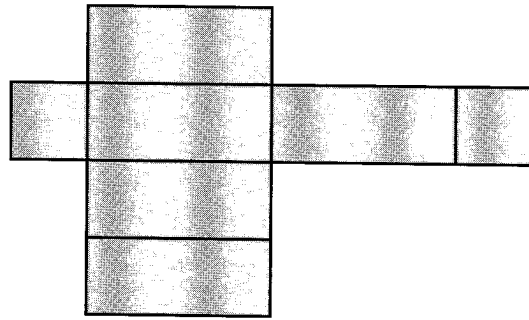
10. Which one of the following can be folded to form a cuboid?



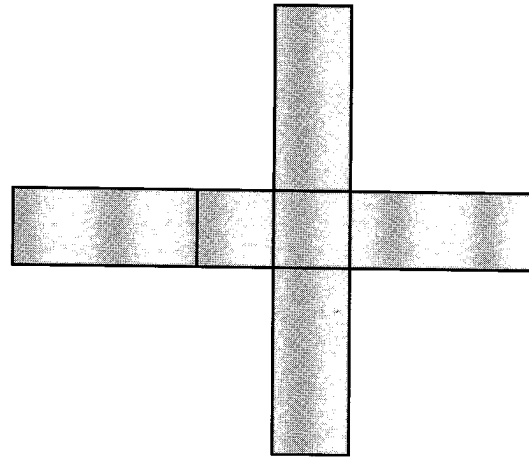
(1)



(2)



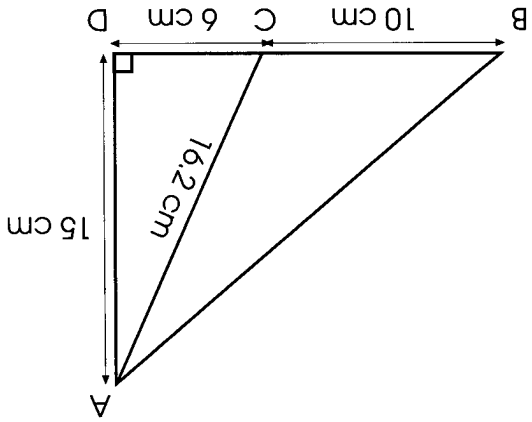
(3)



(4)

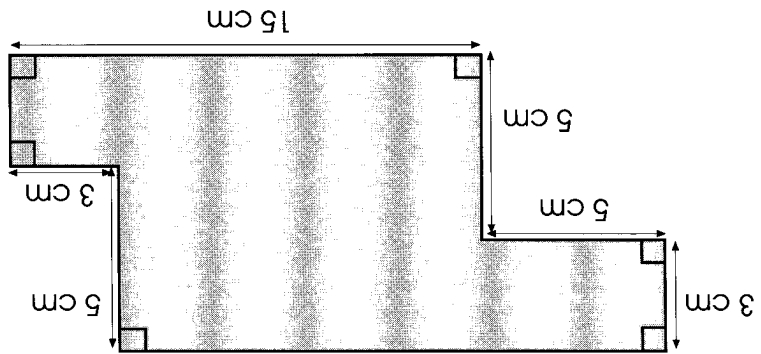
( )

- (1)  $75 \text{ cm}^2$   
 (2)  $120 \text{ cm}^2$   
 (3)  $150 \text{ cm}^2$   
 (4)  $240 \text{ cm}^2$



12. What is the area of the triangle  $ABC$ ?

- (1)  $36 \text{ cm}$   
 (2)  $51 \text{ cm}$   
 (3)  $53 \text{ cm}$   
 (4)  $56 \text{ cm}$



11. What is the perimeter of the figure?

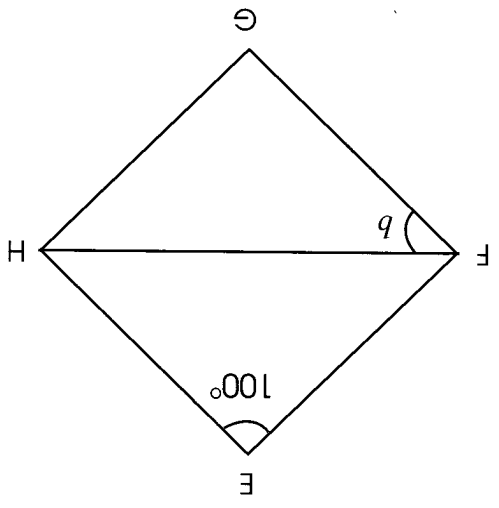
( )

( )

( )

- (1)  $\frac{9}{7}$
- (2)  $\frac{3}{2}$
- (3)  $\frac{6}{5}$
- (4)  $\frac{9}{4}$

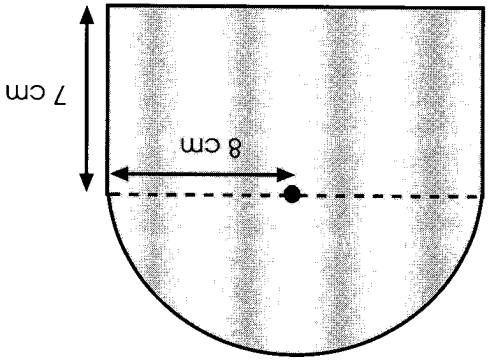
15. Which of the following fractions is less than  $\frac{5}{8}$ ?



( )

- (1) 30°
- (2) 35°
- (3) 40°
- (4) 45°

14. EFGH is a rhombus. Find  $\angle b$ .

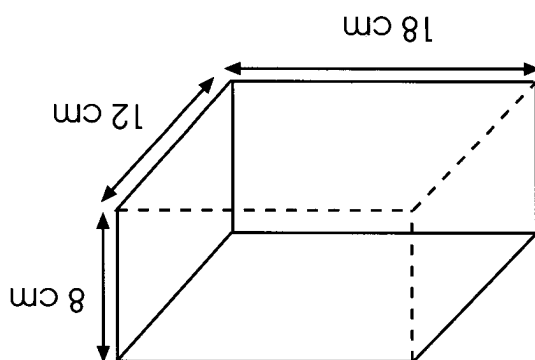


( )

- (1) 55.13 cm
- (2) 71.13 cm
- (3) 80.27 cm
- (4) 96.27 cm

13. The figure shown is made up of a semicircle and a rectangle. Give your answer correct to 2 decimal places.

perimeter of the figure. Find the



18. What is the volume of the cuboid shown below?

Ans: \_\_\_\_\_

17. John has 75 cards and he gives Peter 60 cards. How many percentage of the number of John's cards is given to Peter?

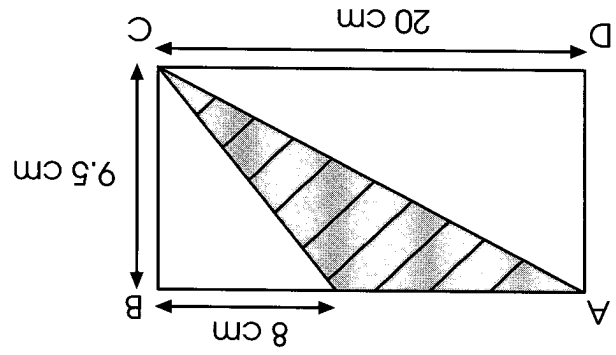
Ans: \_\_\_\_\_

16. A train travelled 216 km in 16 hours. Find its speed.

Ans: \_\_\_\_\_ km/h

## Section B

Answer the following questions.



22. The figure below shows a rectangle ABCD. Find the area of the shaded triangle.

Ans: \_\_\_\_\_

21. Simplify  $17m + 8 - 12m + 13 + 5m - 18$ .

Ans: \_\_\_\_\_

20. Express 45 cm as a fraction of 9 m in its simplest form.

Ans: \_\_\_\_\_

19. The average of three numbers A, B and C is 25. Given that A = 30 and B = 18, what is the value of C?

\_\_\_\_\_ Ans:

26. The area of a square is  $196 \text{ cm}^2$ . What is its perimeter?

\_\_\_\_\_ Ans:

25. What is 60% expressed as a fraction in its simplest form?

\_\_\_\_\_ Ans:

24. Find the product of 354 and 69. Give your answer correct to the nearest hundred.

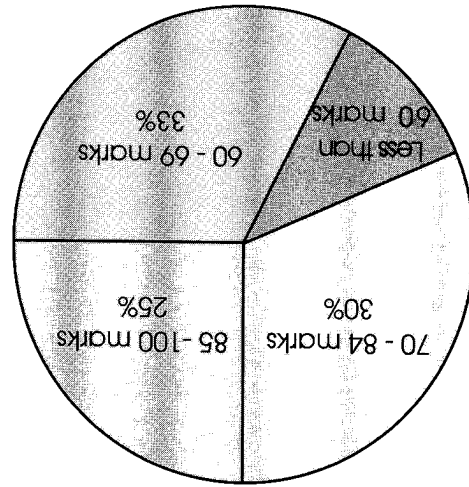
\_\_\_\_\_ Ans: \$

23. Jane spent  $\frac{5}{7}$  of her money and had \$134.80 left. How much money did she have originally?



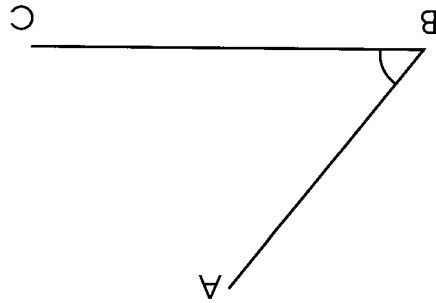
29. Mary and Peter share \$276 in the ratio 5 : 7. How much does Mary get?

Ans: \_\_\_\_\_



28. The pie chart below shows the result of a mathematics test. What percentage of the pupils scored less than 60 marks?

Ans: (a) \_\_\_\_\_



27. The figure shows two straight lines AB and BC.  
 (a) Measure and write down the size of  $\angle ABC$ .  
 (b) Lines AB and BC are the two sides of a parallelogram. Draw the parallelogram by completing the figure below.

30. Write  $\frac{38}{7}$  as a mixed fraction.

31. Find the value of  $\frac{5}{3} \div \frac{6}{8}$ .

Ans: \_\_\_\_\_

32. Find the value of  $3.58 \times 63$

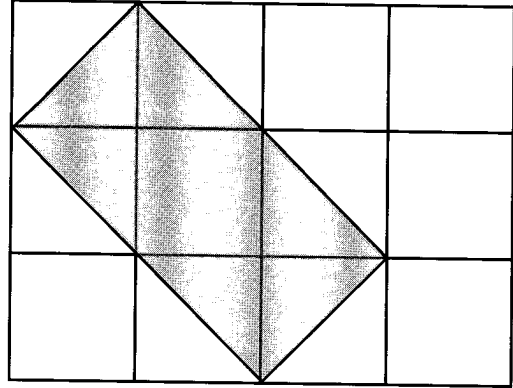
Ans: \_\_\_\_\_

33.  $\frac{4}{3}$  of a number is 15. What is the number?

Ans: \_\_\_\_\_

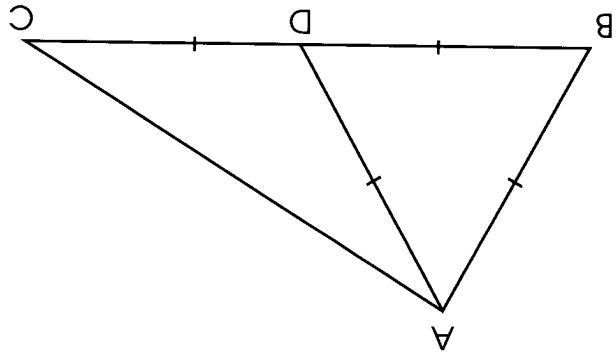
Ans: \_\_\_\_\_

Ans: \_\_\_\_\_

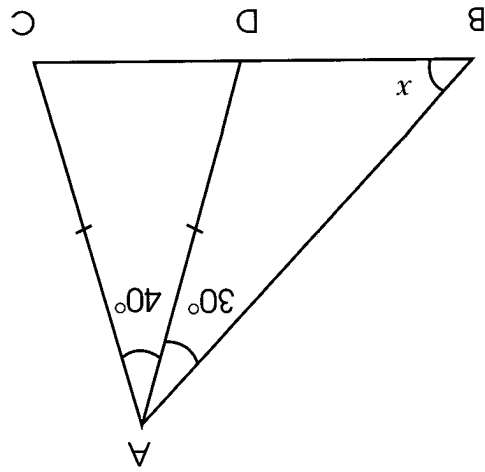


**35.** The figure below is made up of equal squares. Find the ratio of the area of the shaded part to the area of the unshaded part.

Ans: \_\_\_\_\_



**34.** The figure is not drawn to scale.  $AB = BD = AD = DC$ ,  $BDC$  is a straight line. Find  $\angle BAC$ .



37. The figure is not drawn to scale.  $BDC$  is a straight line.  $AD = AC$ . Find  $\angle x$ .

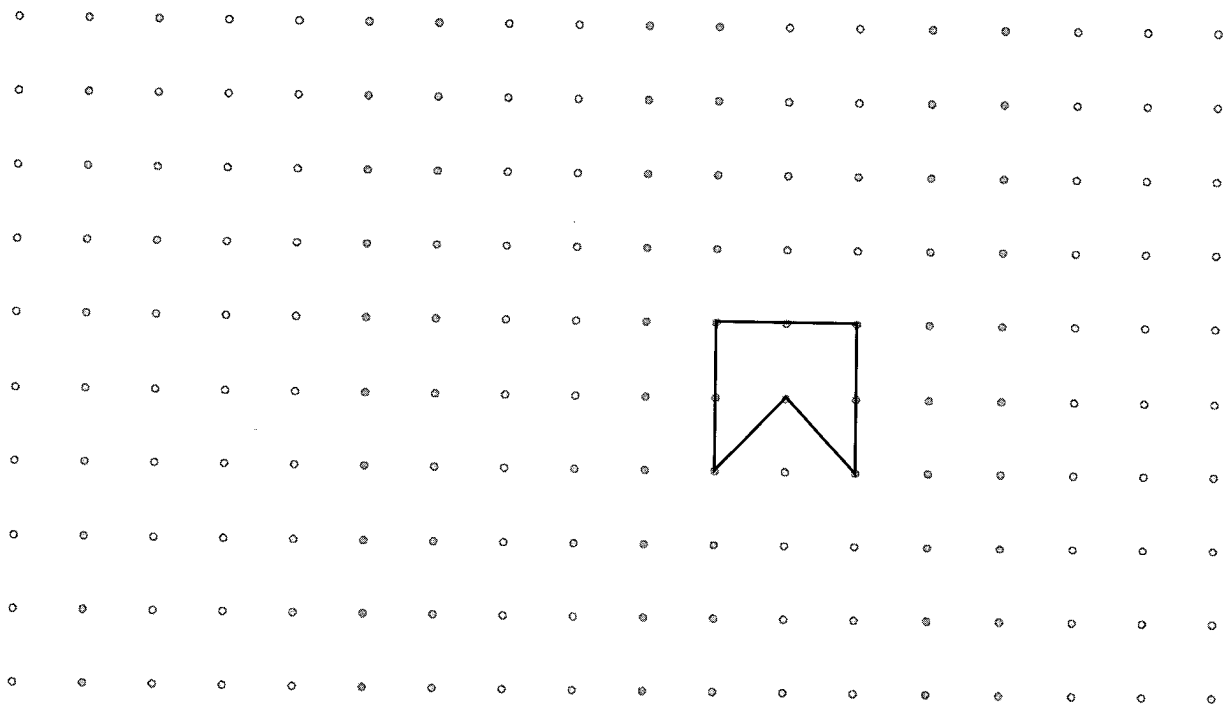
Ans: \$

36. Peter bought a calculator at a discount of 25%. If he paid \$36, what was the usual price of the calculator.

For questions 36 to 50, show your working clearly in the space below each question and write your answers in the spaces provided.

## Section C

38. Use the given shape as a basic shape. Make a tessellation by drawing another 6 unit shapes.



39. Kim's age is  $\frac{5}{3}$  of her father's age. If she is 20 years younger than her father, how old is Kim?

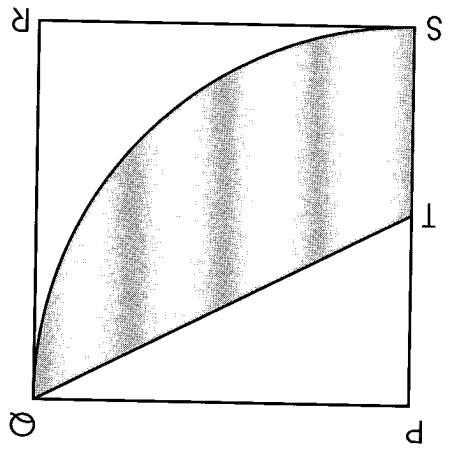
Ans: \_\_\_\_\_

- 40.** Mr Lee has \$1500. He spends \$120 on clothing. He also spends 4 times as much on food as on transport. He has \$580 left.  
(a) How much does he spend on transport?  
(b) How much does he spend on food?

\_\_\_\_\_ (b)

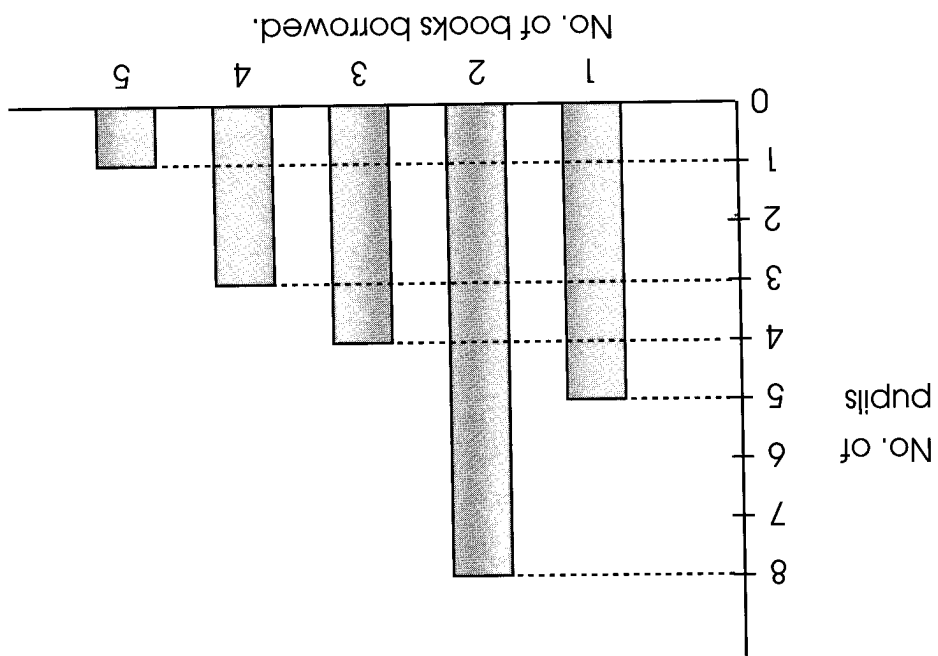
\_\_\_\_\_ Ans: (a)

41. In the figure, PQRS is a square. The length of each side is 24 cm. P is the centre of a quadrant. TQ = 26.8 cm and PT = TS. Find the perimeter and the area of the shaded part. Take  $\pi = 3.14$ .



Ans: Perimeter = \_\_\_\_\_ cm  
 Area = \_\_\_\_\_ cm<sup>2</sup>

42. Miss Li recorded the number of books each pupil in her class borrowed as follows.



- (a) What was the total number of books borrowed by the pupils?  
 (b) What percentage of the pupils in the class borrowed fewer than 3 books? Give your answer correct to the nearest 1%.

Ans: (a) \_\_\_\_\_  
 (b) \_\_\_\_\_



- 43.** In Mr Lim's farm, the ratio of the number of cows to the number of sheep is 3 : 5. The ratio of the number of sheep to the number of horses is 4 : 1. There are 36 cows in his farm.
- (a) How many sheep are there in the farm?
- (b) How many horses are there in the farm?

Ans: (a) \_\_\_\_\_

(b) \_\_\_\_\_

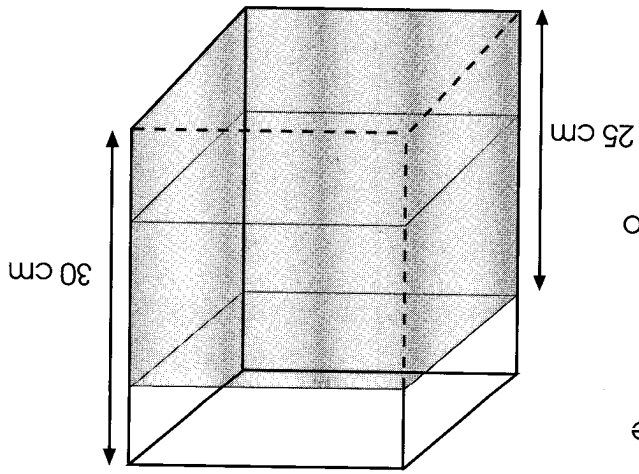
- 44.** Mr Tan had some apples to sell. He sold 32% of the apples on the first day and 36% of the apples on the second day. He sold the remaining 192 apples on the third day.
- (a) How many apples did Mr Tan sell in the three days?  
(b) How many apples did Mr Tan sell on the second day?

\_\_\_\_\_ (b)

\_\_\_\_\_ (a) Ans:

45. A rectangular container with a square base is 30 cm high. It is  $\frac{3}{4}$  full of water. When  $\frac{3}{4}$  of water is added into it, the water level becomes 25 cm high.

- (a) What is the capacity of the container in  $\text{cm}^3$ ?  
 (b) What is the length of the square base?  
 Give your answer correct to 2 decimal places.



Ans: (a)  $\text{cm}^3$   
 (b) cm

- 46.** A rope of length  $p$  cm is cut into 3 parts. The first part is 12 cm. The length of the second part is 3 times as much as the length of the third part.
- (a) What is the length of the third part in terms of  $p$ ?
- (b) When  $p = 50$  cm, find
- (i) the length of the third part,
- (ii) the length of the second part.

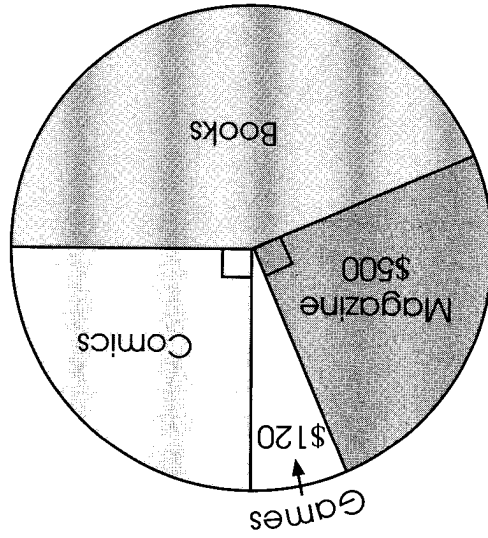
Ans: (a)

(i)

(ii)

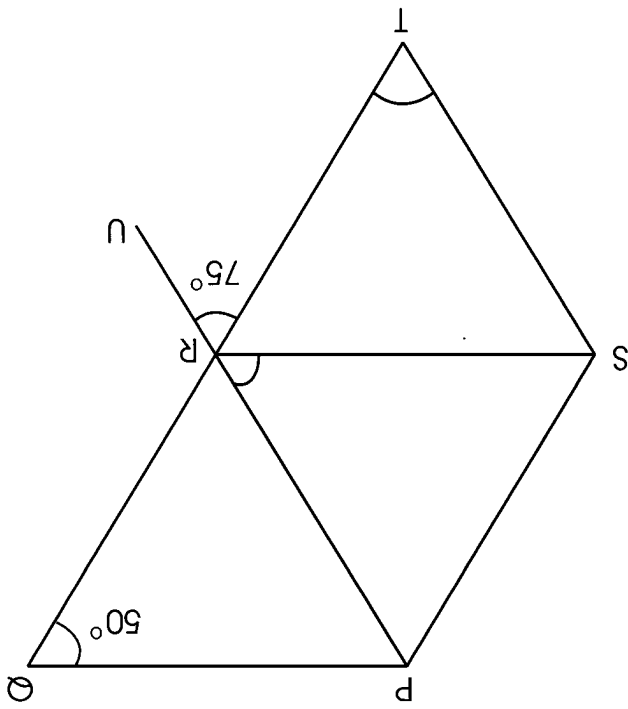
- \_\_\_\_\_ (d)  
 \_\_\_\_\_ (c)  
 \_\_\_\_\_ (b)  
 \_\_\_\_\_ (a) Ans:

- (a) How much money was collected in total?  
 (b) How much money was collected from books?  
 (c) What percentage of the money collected was from games?  
 (d) What percentage of the money collected was from comics?



47. The pie chart below shows the amount of money collected by a bookshop for the different types of publications in a week.

\_\_\_\_\_ (b)  
 \_\_\_\_\_ (a) Ans: suv



48. The figure below is not drawn to scale. PQRS and PRTS are parallelograms.  
 (a)  $\angle PRS$ ,  
 (b)  $\angle STR$ .

**49.** In a theatre, the ratio of the number of men to the number of women to the number of children is 3 : 5 : 6. There are 186 women more than men in the theatre.

(a) How many children are there in the theatre?

(b) How many men are there in the theatre?

(c) How many people are there in total in the theatre?

Ans: (a) \_\_\_\_\_  
(b) \_\_\_\_\_  
(c) \_\_\_\_\_



- 50.** At 6.00 a.m., Mr Lim drove from Town A to Town B. At 6.45 a.m., Mr Tan left Town A for Town B and drove along the same route as Mr Lim. Mr Tan's speed is 12 km/h faster than Mr Lim. At 6.45 a.m., Mr Lim had travelled 36 km. Finally, the two men arrived at Town B at the same time.
- (a) What is the speed of Mr Tan?
- (b) When did Mr Tan and Mr Lim arrive at Town B?

Ans: (a)

(b)