

Part-A : Mathematics

Section-I

(Each question carries two marks)

1. Form the smallest and greatest 6-digit numerals by repeating any 2 digits from 7, 9, 5, 4.
2. Find the square root of 7921.
3. If a man can do a work in 32 days, in how many days will 24 men complete the same work?
4. Find the simple interest, if $P = ₹ 400$, $R = 3.65\%$ per annum and time = 150 days.
5. Round 48,540 and 23,467 to the nearest 1000 and find the difference.
6. Express 804.291 kg as decagrams.
7. Find the smallest number which when divided by 12 and 20 leaves no remainder.
8. Sonali and Priya are classmates. Sonali completed her homework in $\frac{5}{6}$ of an hour and Priya in $\frac{3}{4}$ of an hour. Who was faster?
9. Simplify $6\frac{3}{10} - 2\frac{3}{4} - 1\frac{2}{5}$
10. Two angles of a quadrilateral are each 90° and remaining two angles are such that one is 3 times the other. Find these two angles.

Section-II


(Each question carries three marks)









11. Find the ratio of 90 cm to 1.5 m.

12. Arrange the following in descending order:

$$\frac{3}{7}, \frac{3}{11}, \frac{3}{5}, \frac{3}{2} \text{ and } \frac{3}{17}$$

13. The number of girl students in each class of a co-educational middle school is depicted by the pictograph:

Classes Number of girl students  - 4 Girls

Classes	Number of girl students	
I		
II		
III		
IV		
V		
VI		
VII		
VIII		

Observe this pictograph and answer the following questions:

- (a) Which class has the maximum number of girl students?
 - (b) Is the number of girls in Class V less than the number of girls in Class III?
 - (c) How many girls are there in Class VII?
14. Akhilesh runs a coffee shop and sells 51 cups of coffee in 6 hours. If this is three-fourths of the total number of cups he sells in the whole day, find out the number of cups he sells in a day.

15. Simplify $4\frac{6}{8} - \left\{ 3\frac{1}{3} + \left(2\frac{1}{2} - 1\frac{1}{4} \right) \right\}$.
16. Find the greatest number which divides 149 and 101 leaving remainder 5 in each case.
17. Mrs. Singhal deposited ₹ 10,000 in a Post Office Saving at an interest of 3% per annum. How much amount will she receive at the end of 4th month?
18. Suppose your watch gains 4 seconds every 8 hours. How many seconds will it gain in a week?
19. A fruit seller had 2,00,000 apples. He packed them in boxes. Each box contains 176 apples. How many boxes were used and how many apples were left over?
20. Find the average of all prime numbers between 60 and 80.

Section-III

(Each question carries five marks)

21. Bob wants to cover the floor of a room 3 m wide and 4 m long by squared tiles. If each square tile is of side 0.5 m, then find the number of tiles required to cover the floor of the room.
22. Name the types of following triangles:
 (a) Triangle with lengths of sides 7 cm, 8 cm and 9 cm.
 (b) ΔABC with $AB = 8.7$ cm, $AC = 7$ cm and $BC = 6$ cm.
 (c) ΔPQR such that $PQ = QR = PR = 5$ cm.
 (d) ΔDEF with $m\angle D = 90^\circ$.
 (e) ΔXYZ with $m\angle Y = 90^\circ$ and $XY = YZ$.
23. Find the smallest 4 digit number such that when it is divided by 12, 18, 21 and 28, it leaves remainder 3 in each case.

24. How much time will a 171 m long train take to cross 229 m long bridge, if it is running at a speed of 45 km/h?
25. Divide rupees 4000 among A, B, C, so that their shares may be in the ratio of 5 : 7 : 8.
26. Find the number of cubical boxes of cubical side 3 cm which can be accommodated in a carton of dimension 15 cm \times 9 cm \times 12 cm?
27. Fill in the blanks:
 (a) There are only symbols in Roman numerals.
 (b) The predecessor of the smallest 8 digit number is
 (c) $\frac{4}{7} X \dots\dots\dots = 84$
 (d) Length of a Rectangle = $\frac{?}{\text{Breadth}}$
 (e) is the smallest prime number.
28. A crockery dealer ordered for 50 pieces of China tea sets for ₹ 18,000. When the goods arrived, he found that two tea sets were damaged. At what price per set should he sell the remaining tea sets to earn a total profit of ₹ 1200?
29. Vina's father baked a rectangular cake. In the evening $\frac{5}{6}$ of the cake was left. Vina ate half of it. What fraction of the cake did Vina eat?
30. (a) The product of two numbers is 2925. If LCM is 195, find HCF.
 (b) Sohan bought rice at ₹ 4800.75 per quintal. Due to a fall in prices he could sell it as ₹ 4600.75 per quintal only. Find his total loss if he has bought 13.5 quintals rice.

PART-B : LANGUAGE ABILITY

1. Write 15 sentences on any *one* of the following topics: (15)
Importance of Cleanliness or A Journey by Bus.

2. Read the following passage carefully and answer the questions that follow: (15)

The Sahara Desert covers large parts of Africa. The desert is covered with sand dunes or sand seas. The desert also has several deeply dissected mountains and mountain ranges along with many volcanic mountains. Most of the rivers and streams that are found in Sahara are seasonal or intermittent, except the Nile river, which crosses the desert from its origins in central Africa to empty into Mediterranean.

The central part of the Sahara is very dry, with little vegetation. The northern and southern reaches of the desert, along with the highlands, have areas of sparse grasslands and desert shrub, with trees and taller shrubs at places where moisture collects.

- (a) What is the meaning of word "seasonal"?
- (b) "The desert is covered by sand dunes or sand seas". What is the meaning of sand sea in the paragraph?
- (c) "The central part of Sahara is very dry, with little vegetation". What does it mean?
- (d) Give the meaning of "sparse".
- (e) What is the meaning of vegetation in paragraph?

3. Make your own sentences using the underlined words in the following paragraph. (5 × 2 = 10)

Do you support a football or hockey team? Perhaps you follow the success of your national cricket team. You know every game has its own importance and follows its own discipline. To become a good player of any game you need to have regular practice of that game. Learning basic skills of the game is very essential.

- (a)
- (b)

- (c)
- (d)
- (e)

4. Form meaningful sentences by rearranging the words in proper order: (5 × 2 = 10)

- (a) crying/she had/as/lost her/Manju was/pencil
- (b) at that hospital/Anil said that/was a doctor/his father
- (c) environmental/of everybody/protection/is responsibility/the
- (d) the/knocking/who/at/door/is
- (e) early to bed/good habit/and early to rise/is a

5. Give one word for the following: (5 × 1 = 5)

- (a) A person who carries our luggage
.....
- (b) A person who spends money extravagantly
.....
- (c) Young one of a horse
.....
- (d) Happening once in two years
.....
- (e) One who makes wooden furniture
.....

6. Choose the correct word given in the brackets and fill in the blanks: (5 × 2 = 10)

- (a) Cleanliness is next to
(God, Goddess, Godliness)
- (b) My father tells me to daily.
(Play, played, playing)
- (c) Yesterday, a cyclone a small town near the beach. (hit/has hit)
- (d) I like blue candle the best.
(a, an, the)
- (e) There is eucalyptus tree beside the house. (a, an, the)

7. Use the given word in separate sentences of your own to show the difference in the meaning of the words of the pair given below: (5 × 2 = 10)

- (a) Early, Yearly
- (b) Greatness, Grateful
- (c) Pray, Prey
- (d) Break, Brake
- (e) Lose, Loose

8. Give the Antonym (opposite) of the following words: (5 × 1 = 5)

- (a) Risky (b) Doubtful
(c) Negligent (d) Deep
(e) Differ

9. Change each of the following as directed: (5 × 2 = 10)

(a) The news is too good to be true.
(Remove "too")

.....
(b) She is your mother.
(Change into interrogative)

.....
(c) Fire destroyed the town.

(Change the Voice)

.....
(d) He said, 'I am very thirsty'
(Change into indirect speech)

.....
(e) Raju is not as bad as Gaurav.
(Rewrite using comparative form of "good")

.....
10. Imagine your name is Akash and you live at House No. 23, Dr Kalam Road, Jayanagar, Bangalore. Your sister, Deepika who lives at Shanti Nivas, Linking Road, Mumbai, has sent you a Rakhi on Rakshbandhan. Write a letter of thanks to her. (10)

PAPER-II : INTELLIGENCE TEST*

Directions (Qs. 1-6) : In each of the following series determine the order of the letters/numbers. Then from the given options select the one which will complete the given series.

1. B D G K ? V
(a) N (b) P
(c) Q (d) M
2. dfe, jih, mln, ?, vut
(a) oqp (b) psr
(c) prq (d) rsp
3. QPO, SRQ, UTS, WVU, (?)
(a) XVZ (b) ZYA
(c) YXW (d) VWX
4. 4, 9, 19, 34, 54, ?, 109
(a) 89 (b) 84
(c) 74 (d) 79
5. 7776, 1296, 216, 36, 6, ?
(a) 6 (b) 0
(c) 3 (d) 1
6. 3, 15, 90, 630, 5040, ?
(a) 35280 (b) 40320
(c) 45360 (d) 10080

Directions (Qs. 7 and 8): In the following questions select the right option which indicates the correct code for the word or letter given in the question.

7. If BAD is coded as 7, HIS as 9, LOW will be coded as :
(a) 50 (b) 8
(c) 23 (d) 5
8. In a certain code LIBERATE is written as 56403170, TRIBAL will be written in the same code as :
(a) 734615 (b) 736415
(c) 136475 (d) 034615
9. Reena walked from A and B in the East 10 feet. Then she turned to the right and walked 3 feet. Again she turned to the right and walked 14 feet. How far is she from A?
(a) 4 feet (b) 5 feet
(c) 24 feet (d) 27 feet
10. Amit started walking positioning his back towards the sun. After some time, he turned left, then turned right and towards the left again. In which direction is he going now?
(a) North or South (b) East or West
(c) North or West (d) South or West
11. Pointing to a man, a lady said, "His brother's father is my grandfather's only son." How is the lady related to the man?
(a) Mother (b) Sister
(c) Daughter (d) Aunt

12. Vidya is the wife of Gopi and Gopi is the brother of Akhil. Akhil is the uncle of Vijay. What is Vijay's relation with Vidya?

- (a) Son (b) Nephew
(c) Brother-in-law (d) Brother

Directions (Qs. 13-17) : In the questions given below one term is missing. Based on the relationship of the two given words/letters/numbers find the missing term from the given options.

13. ACE : FGH :: LNP : ?

- (a) QRS (b) PQR
(c) QST (d) MOQ

14. EIGHTY : GIEYTH :: OUTPUT : ?

- (a) UTOPTU (b) UOTUPT
(c) TUOUTP (d) TUOTUP

15. 23 : 53 :: 8 : ?

- (a) 66 (b) 57
(c) 27 (d) 19

16. PEARL : NECKLACE :: FLOWER : ?

- (a) Plant (b) Garden
(c) Petal (d) Bouquet

17. ALPHABET : WORD :: WORD : ?

- (a) Sound (b) Music
(c) Sentence (d) Dictionary

Directions (Qs. 18-24) : In each of the following questions, there are four options. Three options are alike in certain manner. Only one option does not fit in. Choose the one which is different from the rest.

18. (a) 18 (b) 12
(c) 30 (d) 20

19. (a) 336 (b) 213
(c) 436 (d) 819

20. (a) 28751 (b) 52638
(c) 85362 (d) 63852

21. (a) AEHJ (b) ELJK
(c) DHKM (d) CGJL

22. (a) Rabbit (b) Crocodile
(c) Earthworm (d) Snail

23. (a) Tree (b) Leaf
(c) Bush (d) Herb

24. (a) Doctor (b) Teacher
(c) Engineer (d) Diver

25. How many 7's are there in the following series which are preceded by 6 which is not preceded by 8?

8 7 6 7 8 6 7 5 6 7 9 8 6 1 6 7 7 6 8 8 6
9 7 6 8 7

- (a) 2 (b) 3
(c) 4 (d) Only 1

26. If "+" means "÷"; "×" means "-"; "÷" means "×" and "-" means "+", what will be the value of the following expression?

$$9 + 3 \div 4 - 8 \times 2 = ?$$

(a) $6\frac{3}{4}$ (b) $-1\frac{3}{4}$

(c) $-6\frac{1}{4}$ (d) 18

27. If "-" means "÷"; "+" means "×"; "÷" means "-" and "×" means "+", then which of the following must be true?

(a) $1 \div 2 + 3 \times 6 - 8 = 12$

(b) $2 + 3 - 5 \times 8 \div 4 = 7$

(c) $5 + 6 \times 8 - 2 \div 3 = 31$

(d) $6 \div 1 + 2 - 8 \times 4 = 31$

28. If Thursday was the day after the day before yesterday five days ago, what is the least number of days ago when Sunday was three days before the day after tomorrow?

- (a) Two days ago (b) Three days ago
(c) Four days ago (d) Five days ago

29. If the fifth day of a month is Friday, which of the following will be the Seventh day from 10th of that month?

- (a) Tuesday (b) Monday
(c) Wednesday (d) Thursday

30. In a certain language 'mu mit es' means 'who is she' and 'elb mu es' means 'where is she'. What is the code for 'where' in this language?

- (a) es (b) elb
(c) mu (d) mit

31. In a certain code language '069' means 'grapes are sweet', '476' means 'very sweet fruit' and '509' means 'grapes are ripe'. Which of the following digits means 'ripe' in that language?

- (a) 0 (b) 5
(c) 9 (d) 7

32. If the odd numbers between 20 to 40 are arranged in a row, what will be the 6th number from the right?

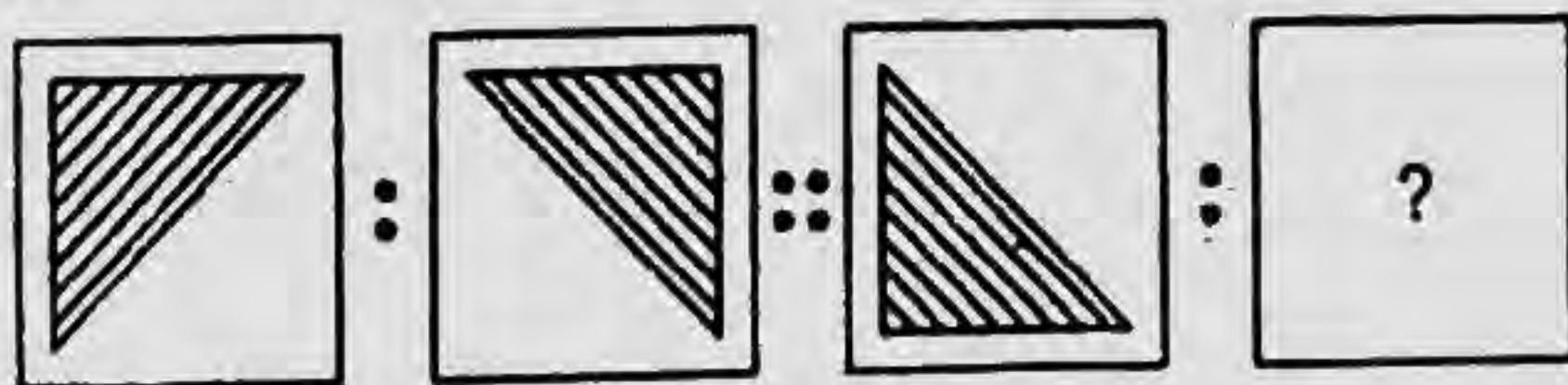
- (a) 27 (b) 31
(c) 33 (d) 29

Directions (Qs. 33-35) : In each of the following questions, three out of four alternatives contain alphabet placed in a particular form. Find the one that does not belong to the group.

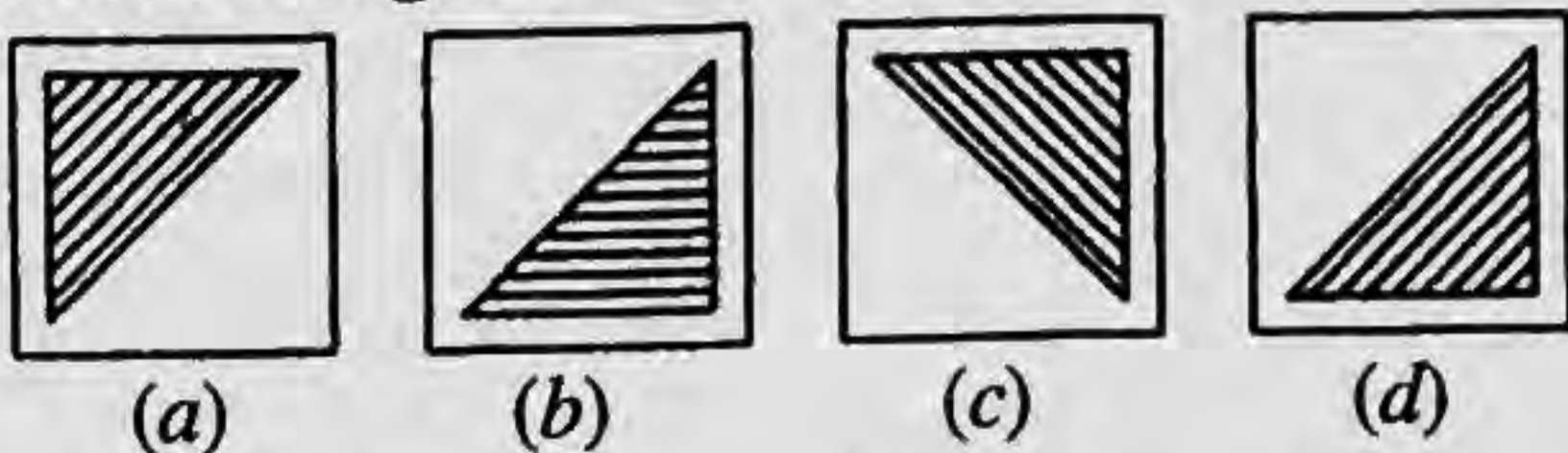
33. (a) PEAR (b) TORE
(c) REAP (d) TEAR
34. (a) QePFoLA (b) OrDFkV
(c) TuMBiN (d) XZaWoB
35. (a) KQ14 (b) AY13
(c) MR11 (d) GW15

Directions (Qs. 36-40): There are two sets of figure given. There is a definite relationship between first two. Establish a similar relationship between third and fourth by selecting a suitable figure from answer that would replace the question mark.

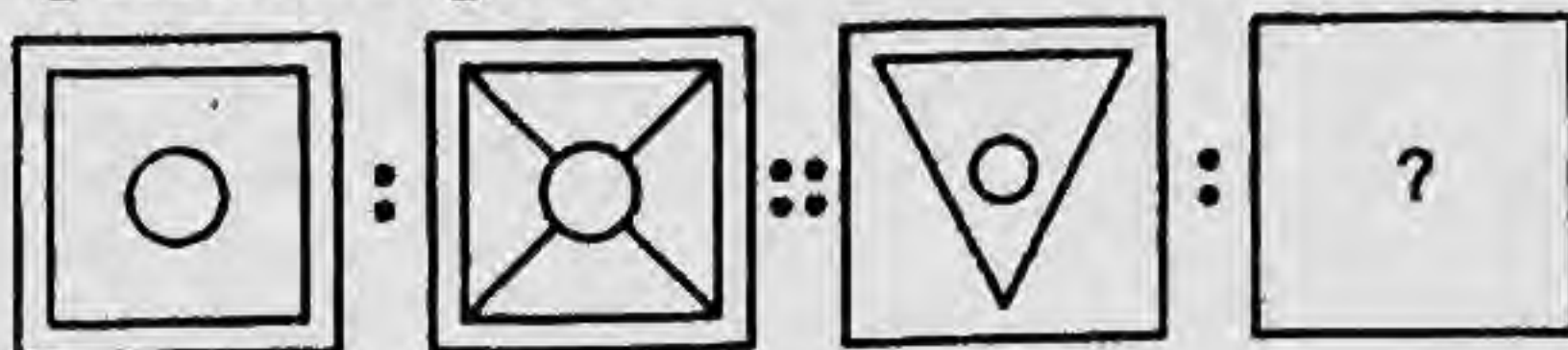
36. Question Figures



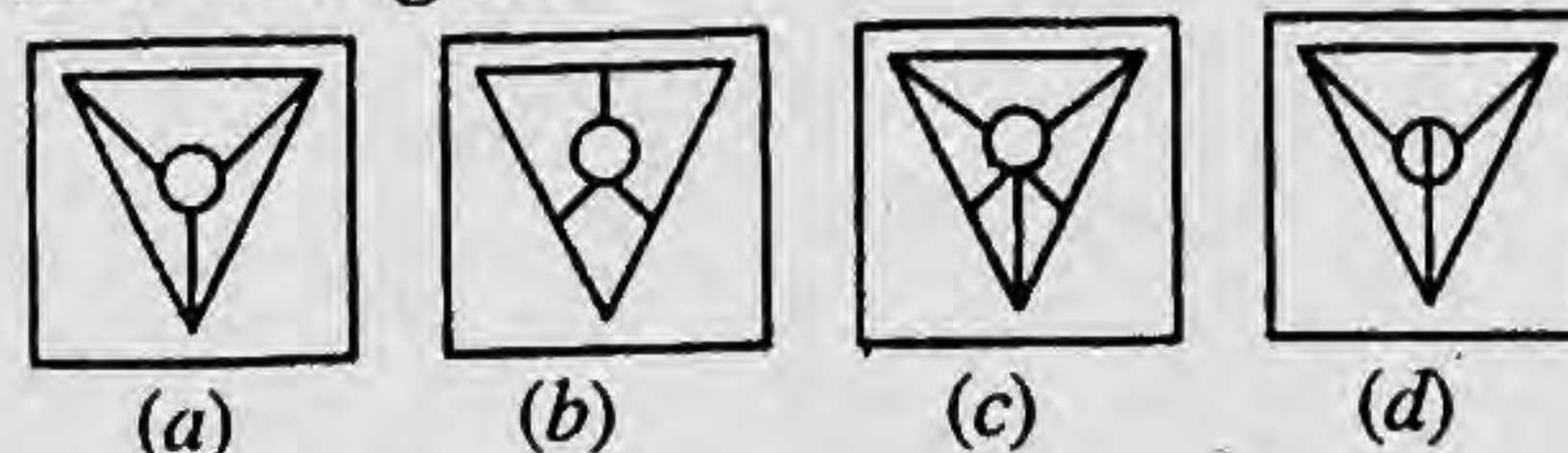
Answer Figures



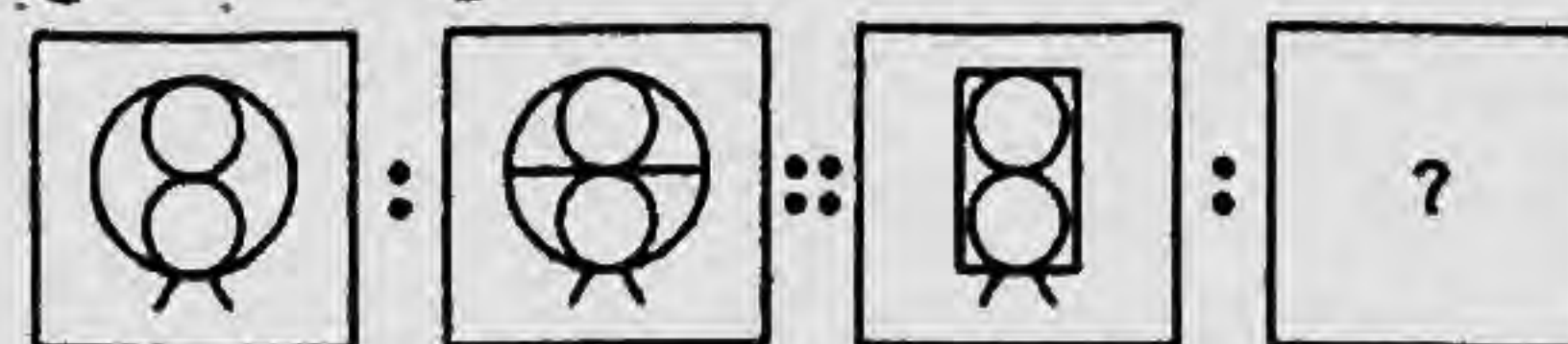
37. Question Figures



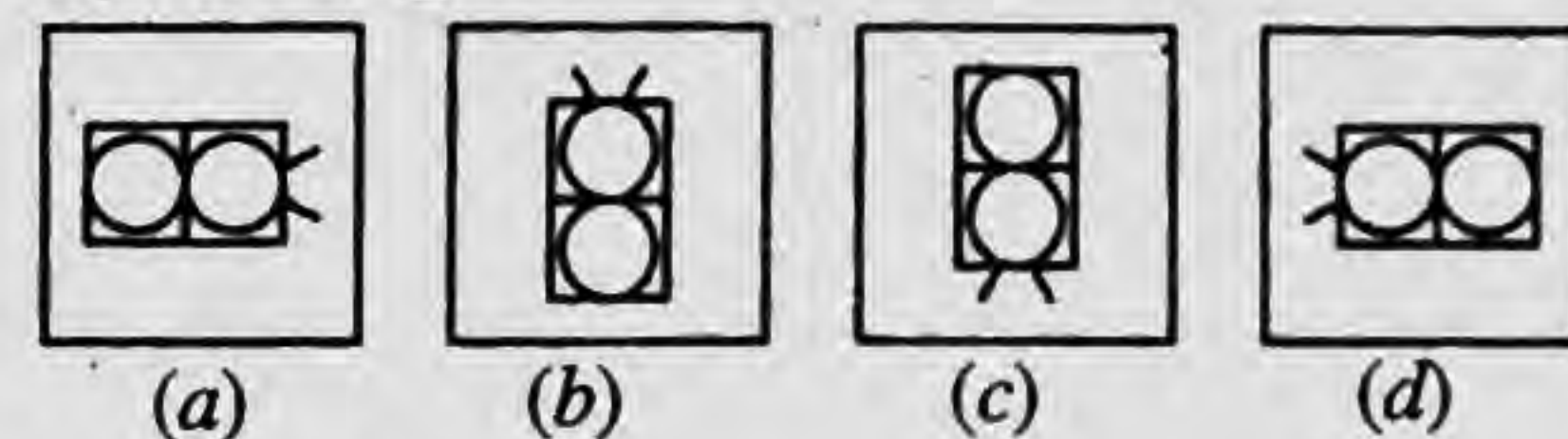
Answer Figures



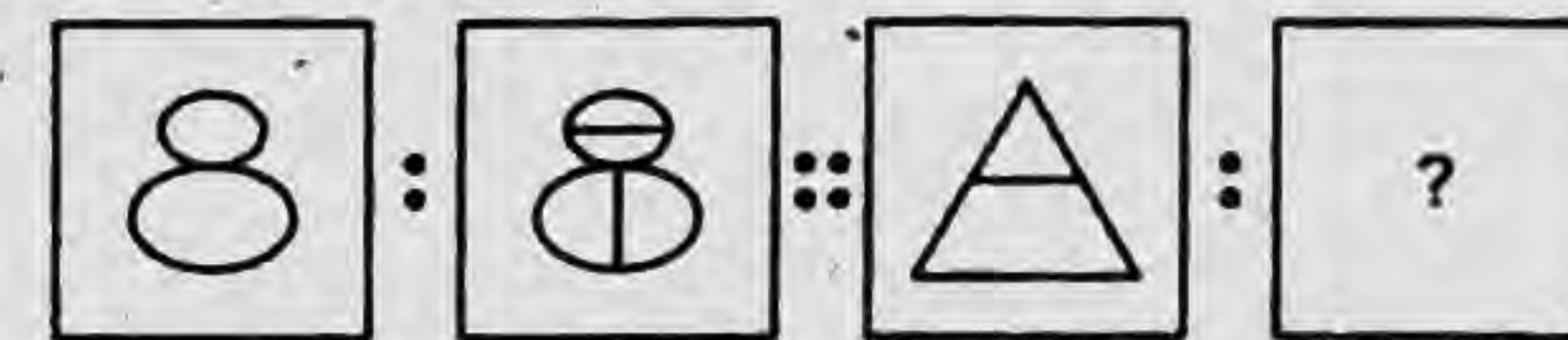
38. Question Figures



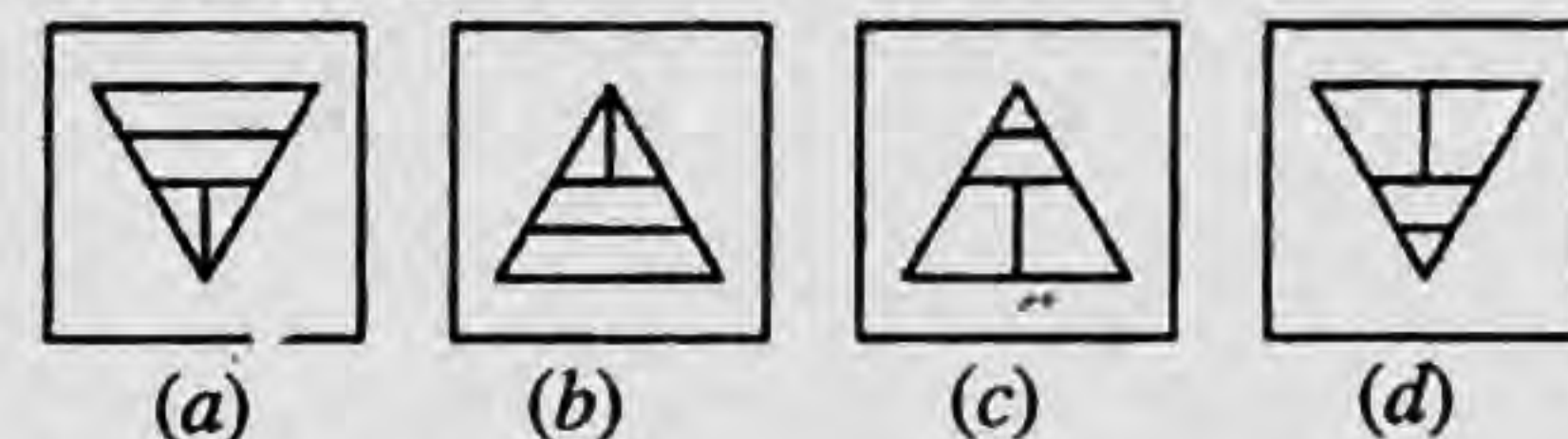
Answer Figures



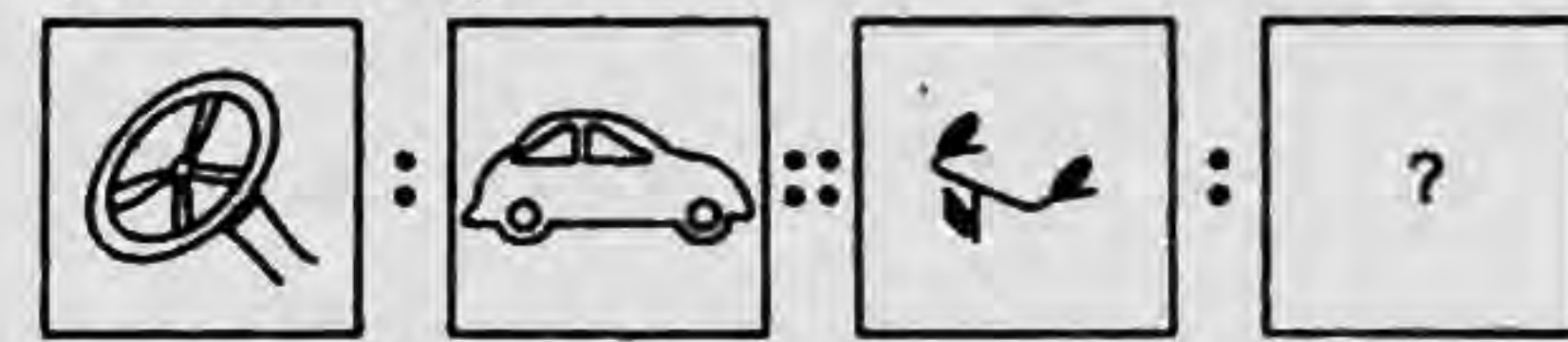
39. Question Figures



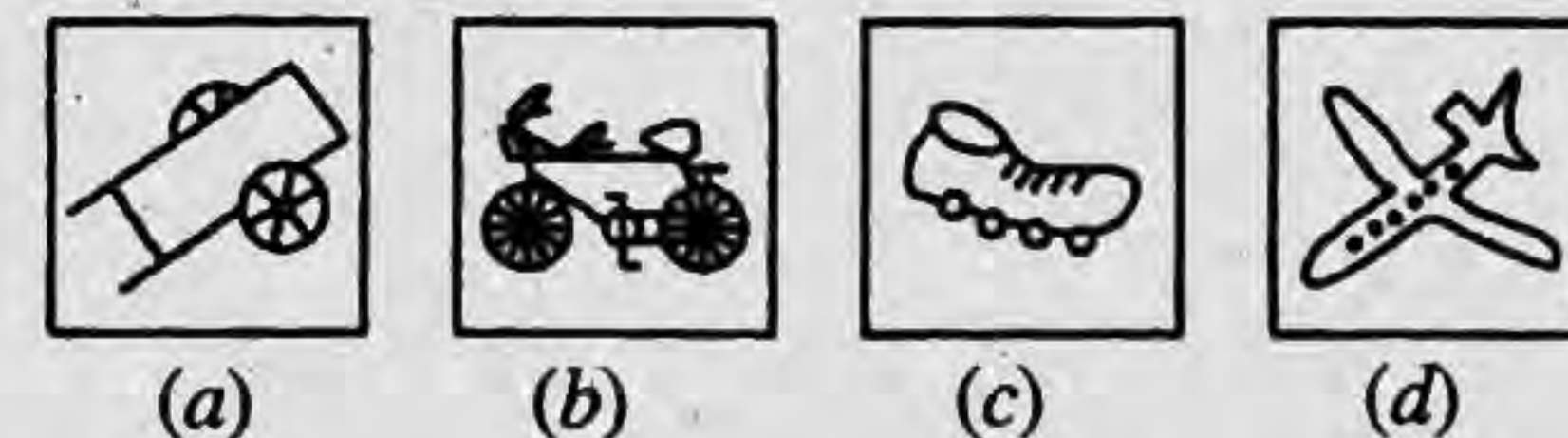
Answer Figures



40. Question Figures

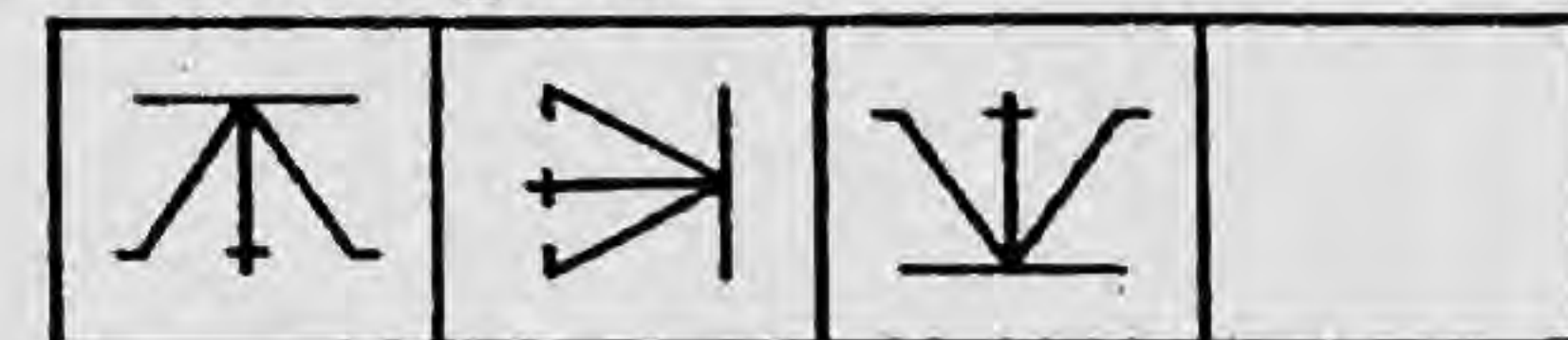


Answer Figures

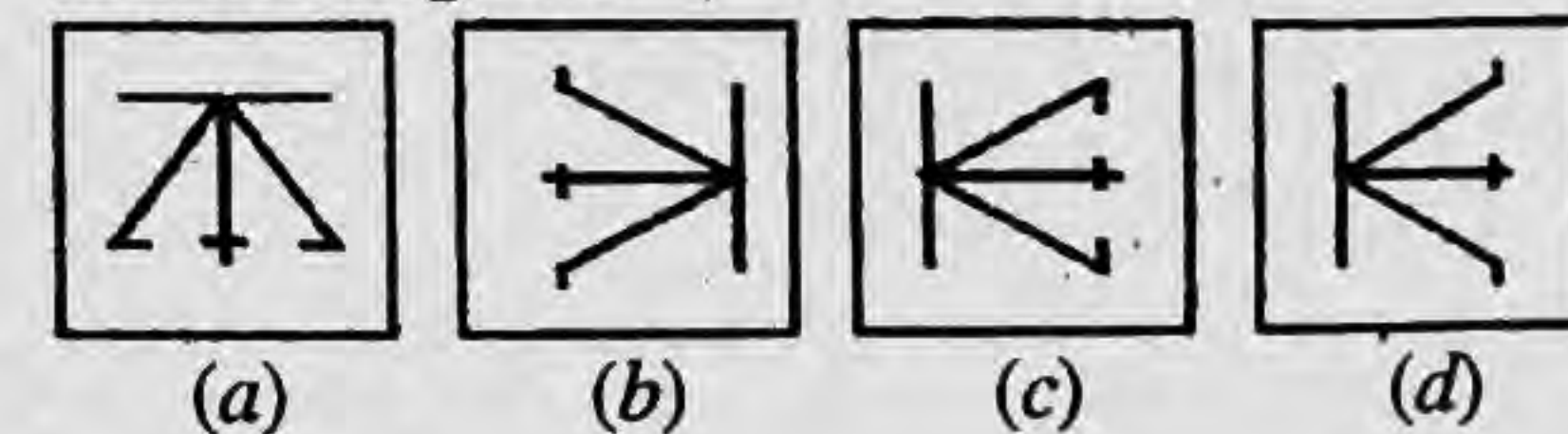


Directions (Qs. 41-45): In each of the following questions, there are three figures and the space for the fourth figure is left blank. The problem figures are in a series. Find out one figure from among the answer figures which occupies the blank space for the fourth figure and completes the series. Indicate your answer in the answer sheet.

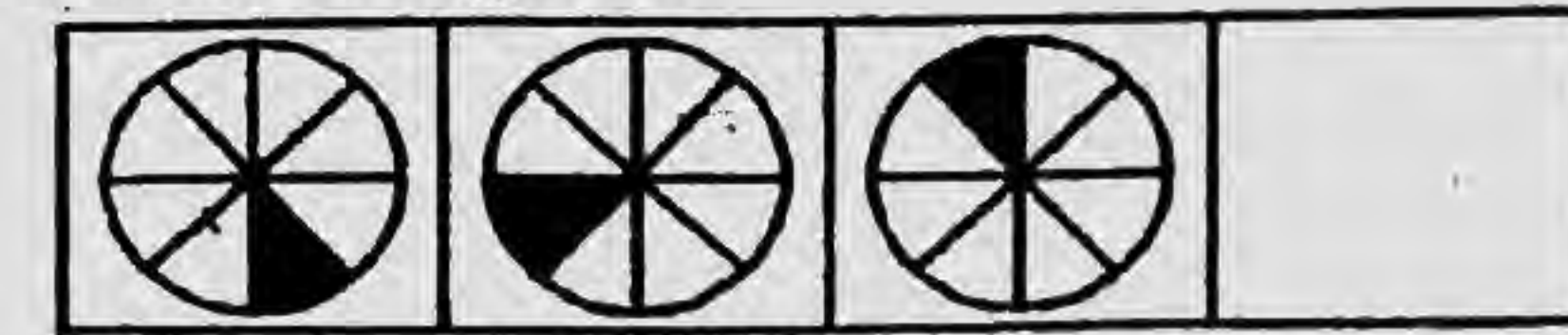
41. Problem Figures



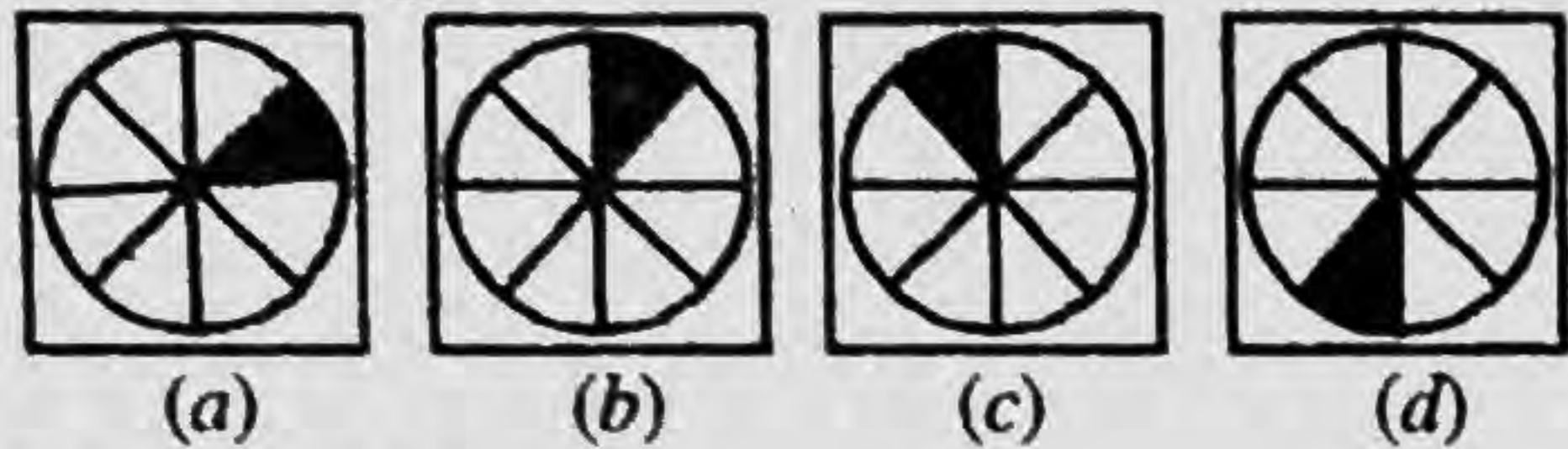
Answer Figures



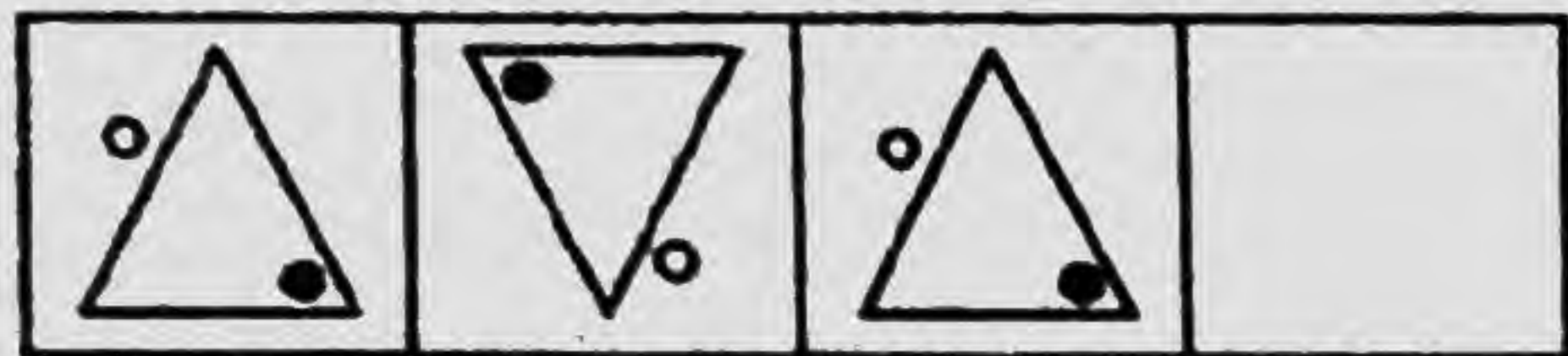
42. Problem Figures



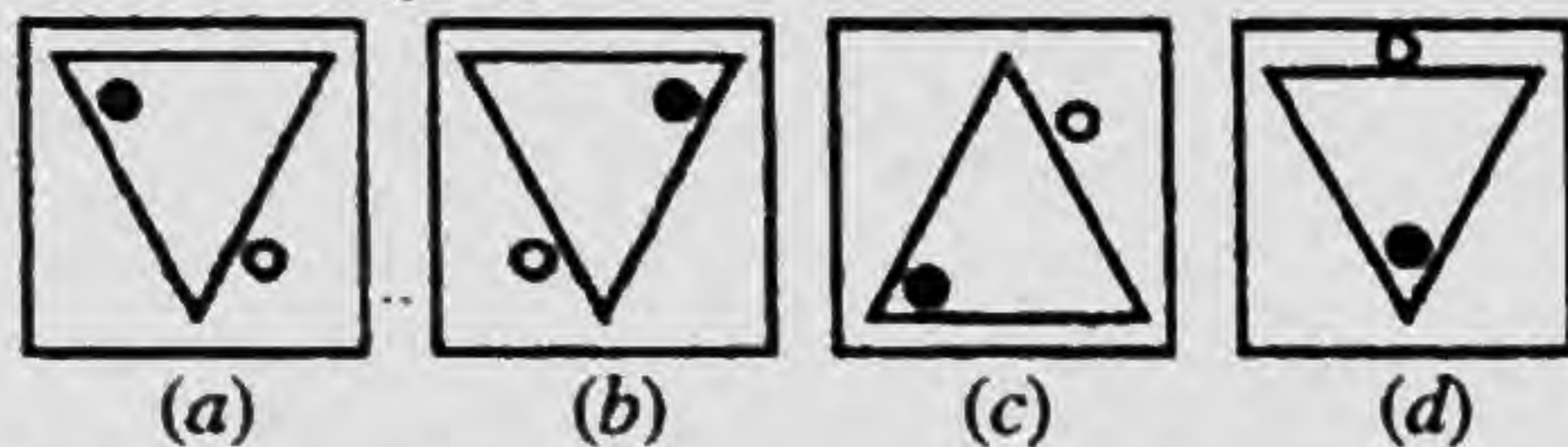
Answer Figures



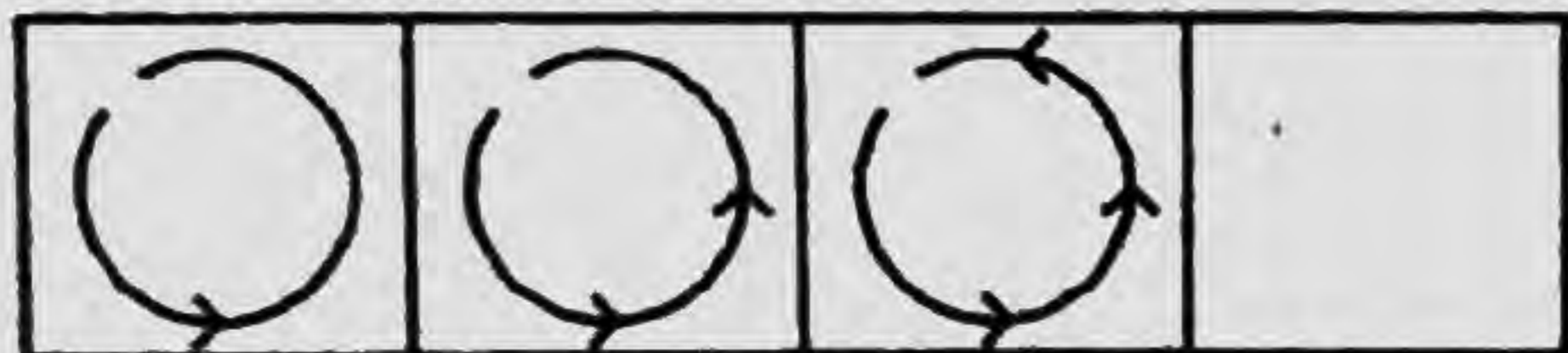
13. Problem Figures



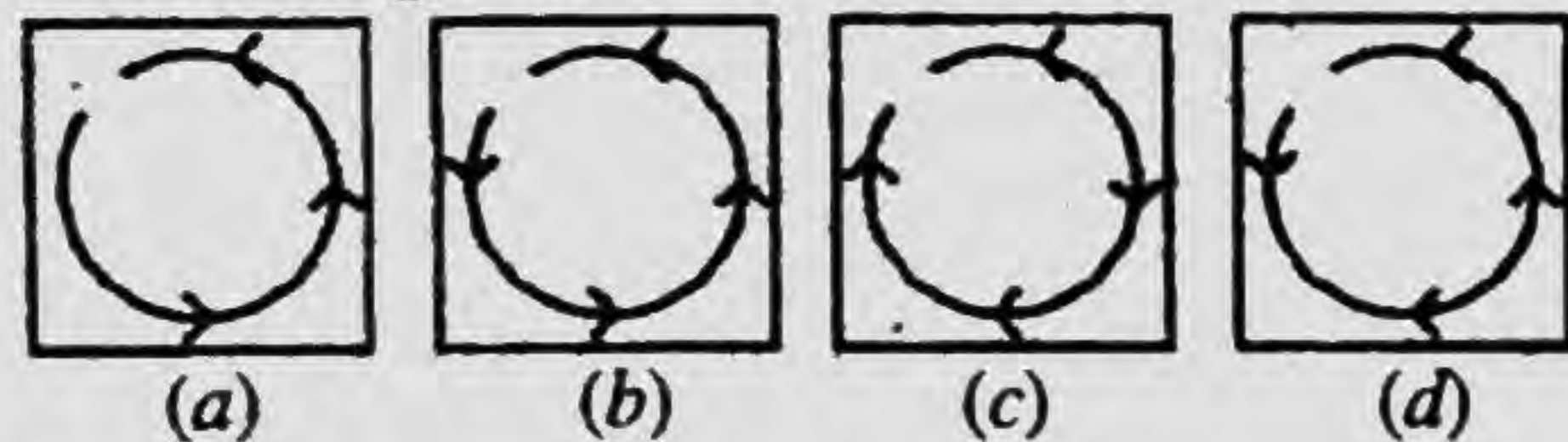
Answer Figures



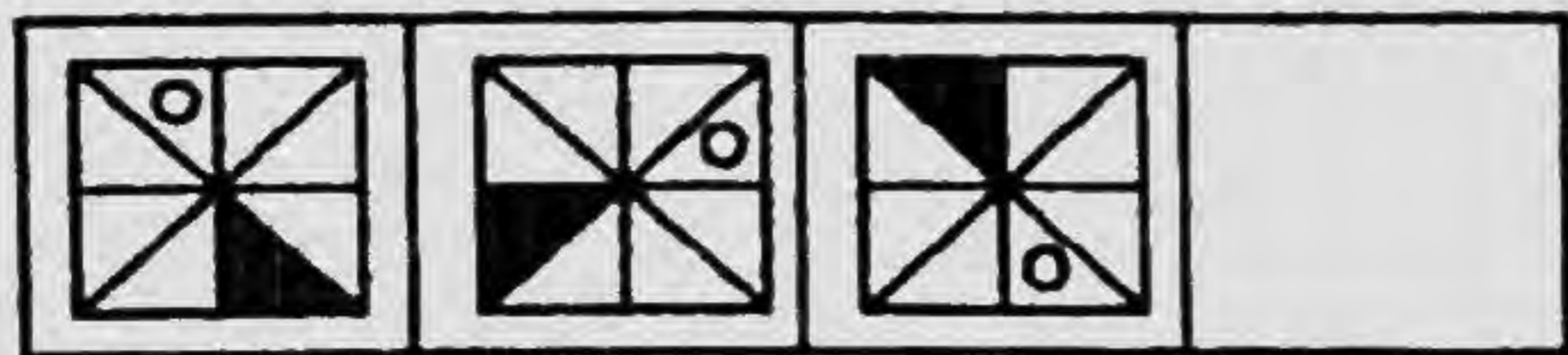
14. Problem Figures



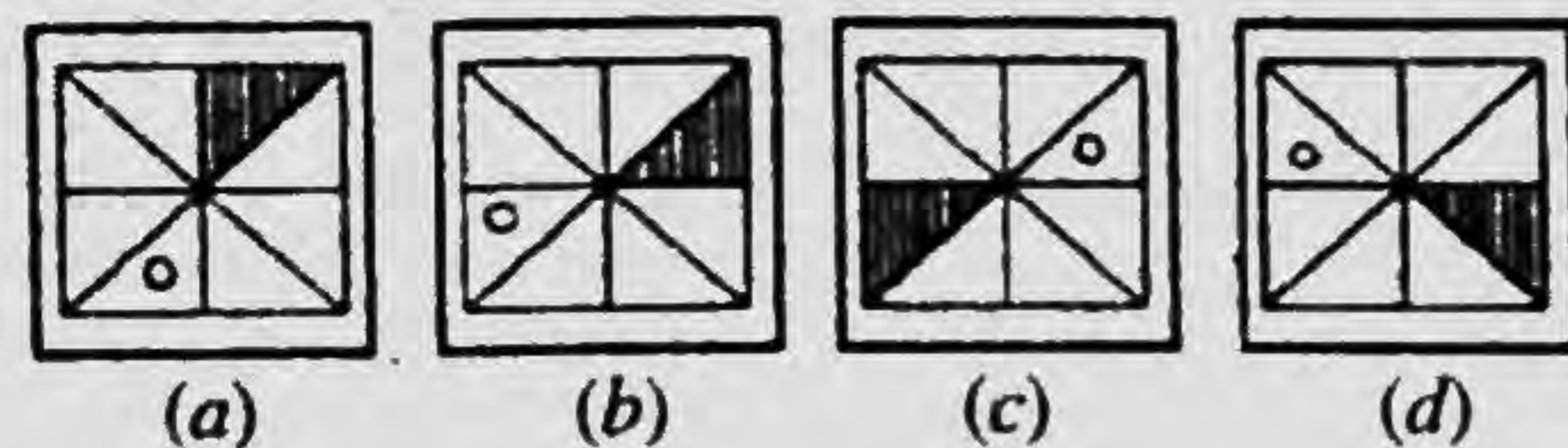
Answer Figures



15. Problem Figures



Answer Figures



Directions (Qs. 46-50) : There is a problem figure on the left-hand side, a part of which is missing. Observe the answer figures (a), (b), (c) and (d) on the right-hand side and find out the answer figure which, without changing the direction, fits in the missing part of the problem figure in order to complete the pattern in the problem figure. Indicate your answer by letter of the answer figure chosen by you in the box against the number corresponding to the questions in the answer sheet.

Problem Figure

Answer Figures

