

ODD MAN OUT

Odd man out problem are very common in competitive exams. In these type of problems, all the terms (alphabets, words, numbers etc.) except first, follow a specific rule or pattern. The term which does not follow the specific rule or pattern is called odd term or odd man.

These problems can be classified into three types:

1. Alphabets problems
2. Words problems
3. Numbers problems

Find odd man out in the following examples:

Example 1. B, C, D, E, F, G, H

Solution. E is odd man, because all other alphabets are consonants.

Example 2. WU, DB, OL, RP, KI, NL

Solution. OL is odd man, because in all other pairs of alphabets gap is -2.

See, W is 23rd alphabet so $23 - 2 = 21$ th alphabet is U. Similarly, D which is 4th alphabet, so $4 - 2 = 2$ which is B and so on. But in case of OL, O is 15th alphabet and $15 - 2 = 13$ th alphabet is M.

Example 3. Red, Yellow, Blue, Green.

Solution. Yellow is odd man because all other are primary colours.

Example 4. Apple, Potato, Orange, Mango, Cherry.

Solution. Potato is odd man, because potato is vegetable where as all other are fruits.

Example 5. Include – Exclude, Import – Export, Admit – Deny, Scared – Afraid.

Solution. Scared – Afraid is odd man because in this pair of words both the words have the same meaning, whereas in all other pairs, both words are opposite in meaning.

Example 6. 1, 4, 9, 16, 25, 37, 49.

Solution. Odd man is 37, because all other numbers are perfect squares.

Example 7. 8, 27, 64, 100, 125, 216, 343

Solution. 100 is odd man, because all other numbers are perfect cubes.

Example 8. 12, 18, 21, 27, 34, 42.

Solution. 34 is odd man because all other numbers are multiple of 3.



EXERCISE 8.3

Find odd man out in the following questions (1 to 19):

1. AC, BD, CE, DG, EG, FH
2. BCD, CDE, DEF, EFG
3. BDF, GIK, LMN, OQS, TVX
4. Venus, Jupiter, Mercury, Pluto, Moon, Neptune
5. Dog and Bitch, Cock and Hen, Cow and Buffalo, Lion and Lioness
6. Peaceful – Quiet, Small – Tiny, Borrow – Land, Want – Desire
7. Violet, Indigo, Black, Green, Yellow, Orange, Red
8. City, Town, District, Village, Towel
9. Reader, Writer, Printer, Publisher
10. Attractive, Pretty, Beautiful, Marvelous, Repulsive
11. 26, 38, 50, 62, 76, 86, 98
12. 67, 65, 62, 60, 57, 55, 53, 50, 47

13. 15, 25, 45, 55, 65, 72, 75, 85
 15. 2, 3, 5, 7, 11, 13, 15, 17, 19, 23
 17. 16, 36, 64, 81, 100, 144, 196
 19. 7, 26, 63, 124, 217, 342, 511

14. 2, 5, 10, 17, 26, 37, 50, 64, 82, 101
 16. 725, 871, 642, 954, 863, 734, 541
 18. 231, 352, 473, 524, 682, 781, 891
 20. 6, 24, 60, 120, 210, 336, 505

Answers

- | | | | |
|--------------------|----------------|----------|----------|
| 1. DG | 2. BCD | 3. LMN | 4. Moon |
| 5. Cow and Buffalo | 6. Borrow-Land | 7. Black | 8. Towel |
| 9. Reader | 10. Repulsive | 11. 76 | 12. 53 |
| 13. 72 | 14. 64 | 15. 15 | 16. 863 |
| 17. 81 | 18. 524 | 19. 217 | 20. 505 |

SYLLOGISM

Syllogism came from a greek word Syllogismos, which means conclusion. Syllogism is a kind of a logical argument in which a conclusion is drawn from two or more given propositions or statements that are assumed to be true.

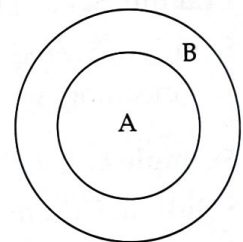
The easiest method of solving Syllogism problems is using Venn diagrams.

In this method we draw all possible Venn diagrams representing all the statements given in the question. If the conclusion can be deduced from all the possible Venn diagrams then the conclusion is true otherwise it is false.

To solve Syllogism problems, let us understand that how the statements can be represented using Venn diagrams.

Statement. All A are B

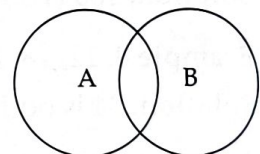
It means A is contained in B i.e. A is a subset of B but converse may not be true i.e. B may not be a subset of A.



Venn diagram

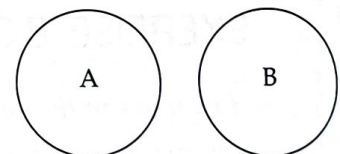
Statement. Some A are B Or Some A are not B

It means A and B intersects each other. So, we can also say that some B are A.



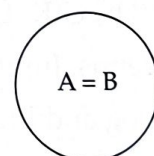
Statement. No A are B Or No B are A

It means there is nothing common in A and B i.e. A and B are disjoint sets.



Statement. A = B

It means A is subset of B and B is a subset of A.



In the following examples, which of the two conclusions is/are true on the basis of given statements:

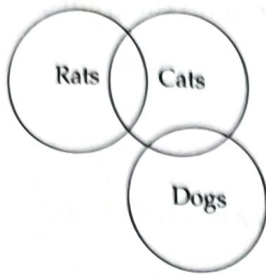
Example 1. Statements I: Some rats are cats

II: Some cats are not dogs

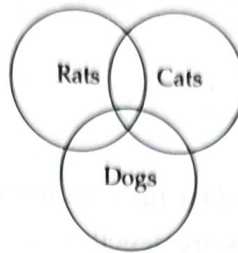
Conclusions I: Some cats are rats

II: Some dogs are rats

Solution. For the given statements; two possible Venn diagrams are shown below:



(i)



(ii)

Since conclusion I can be deduced from both the Venn diagrams, so conclusion I is true. But conclusion II cannot be deduced from Venn diagram (i), so conclusion II is false.

Example 2. Statements I: Some cups are plates

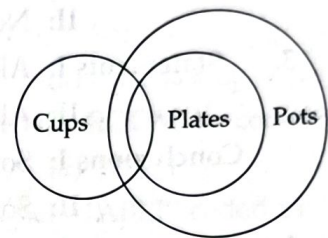
II: All plates are pots

Conclusions I: Some plates are cups

II: Some pots are cups

Solution. For the given statements, the possible Venn diagram is shown in the adjacent figure.

Since both the conclusions can be deduced from the Venn diagram, so both the conclusions are true.



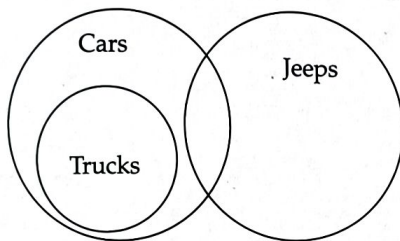
Example 3. Statements I: Some cars are jeeps

II: All trucks are cars

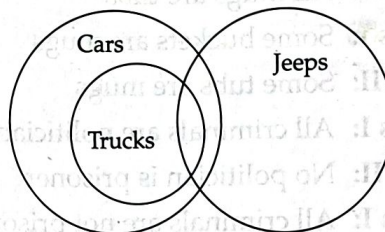
Conclusions I: No truck is jeep

II: Some jeeps are cars

Solution. For the given statements two possible Venn diagrams are shown below:



(i)



(ii)

Since conclusion I cannot be deduced from Venn diagram (ii). So conclusion I is false. Conclusion II can be deduced from both the Venn diagrams, so conclusion II is true.

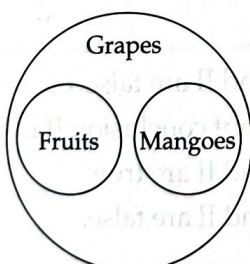
Example 4. Statements I: All fruits are grapes

II: All mangoes are grapes

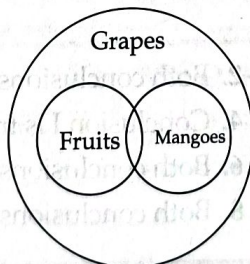
Conclusions I: Some fruits are mangoes

II: Some grapes are mangoes

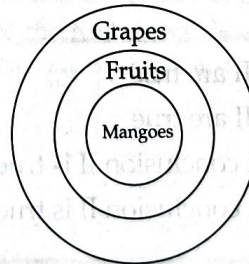
Solution. Four possible Venn diagrams are shown below:



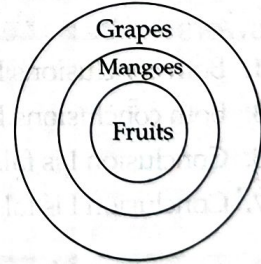
(i)



(ii)



(iii)



(iv)

Conclusion I can be deduced from the Venn diagrams (ii) and (iii) but not by (i) and (iv), so conclusion I is false. Conclusion II can be deduced by all the four Venn diagrams, so conclusion II is true.



EXERCISE 8.4

In the following questions, which of the two conclusions is/are true on the basis of given statements:

1. **Statements I:** All pens are pencils
II: Some books are pens
Conclusions I: Some pencils are books
II: Some pencils are pens
2. **Statements I:** Some cats are pets
II: No pet is lion
Conclusions I: No lion is cat
II: No pet is cat
3. **Statements I:** All fruits are oranges
II: All oranges are onions
Conclusions I: Some onions are oranges
II: Some fruits are onions
4. **Statements I:** Some rajors are brushes
II: Some brushes are not combs
Conclusions I: Some brushes are rajors
II: Some combs are rajors
5. **Statements I:** All buckets are tubs
II: All mugs are tubs
Conclusions I: Some buckets are mugs
II: Some tubs are mugs
6. **Statements I:** All criminals are politicians
II: No politician is prisoner
Conclusions I: All criminals are not prisoners
II: Some politician are criminals
7. **Statements I:** All rectangles are quadrilaterals
II: No quadrilateral is a triangle
Conclusions I: All quadrilaterals are rectangles
II: No triangle is a rectangle.
8. **Statements I:** Some sheeps are goats
II: All animals are sheeps
Conclusions I: Some animals are goats
II: No goat is sheep

Answers

- | | |
|--|--|
| 1. Both conclusions I and II are true | 2. Both conclusions I and II are false |
| 3. Both conclusions I and II are true | 4. Conclusion I is true but conclusion II is false |
| 5. Conclusion I is false but conclusion II is true | 6. Both conclusions I and II are true |
| 7. Conclusion I is false but conclusion II is true | 8. Both conclusions I and II are false. |