logical reasoning.

1. **In a family, there are husband-wife, two sons and two daughters. All the ladies were invited to a dinner. Both sons went out to play. Husband did not return from the office. Who was at home?**

A. Only wife was at home
B. Nobody was at home
C. Only sons were at home
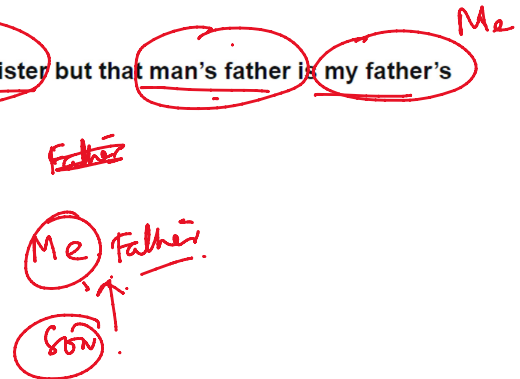D. All ladies were at home ✓

H   (W)   (D1)   (D2)   S1   S2

3. **If 'X $ Y' means 'X is father of Y'; 'X # Y' means 'X is mother of Y'; 'X × Y' means 'X is sister of Y', then how is D related to N in N # A $ B × D ?**

A. Nephew
B. Grandson
C. Granddaughter
D. Cannot be Determined ✓

N # A $ B × D
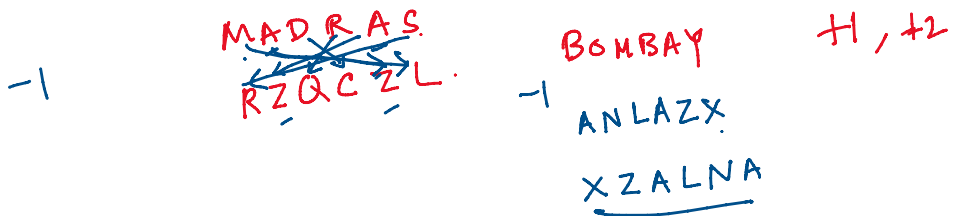
Mother of A.   Father   Sis.   Brother   Sister

4. **Pointing to a photograph, a man said, "I have no brother or sister but that man's father is my father's son." Whose photograph was it?**

A. His own
B. His Son ✓
C. His Father
D. His Grandfather

Father

Me Father
↑
Son

5. **If in a certain language, MADRAS is coded as NBESBT, how is BOMBAY coded in that code?**

A. CPNCBX
B. CPNCBZ ✓
C. CPOCBZ
D. CQOCBZ

−1   MADRAS   BOMBAY   +1, +2
RZQCZL   ANLAZX
−1   XZALNA

6. **In a code language if POSE is coded as OQNPRTDF, then the word TYPE will be coded as**

A. SUXZOQFD
B. SUXZOQFD
C. SUXZOQDF ✓
D. SUXZQODE

POSE   TYPE
OQNPRTDF   SUXZOQDF

7. **Four usual dice are thrown on the ground. The total of numbers on the top faces of these four dice is 13 as the top faces showed 4, 3, 1 and 5 respectively. What is the total of the faces touching the ground?**
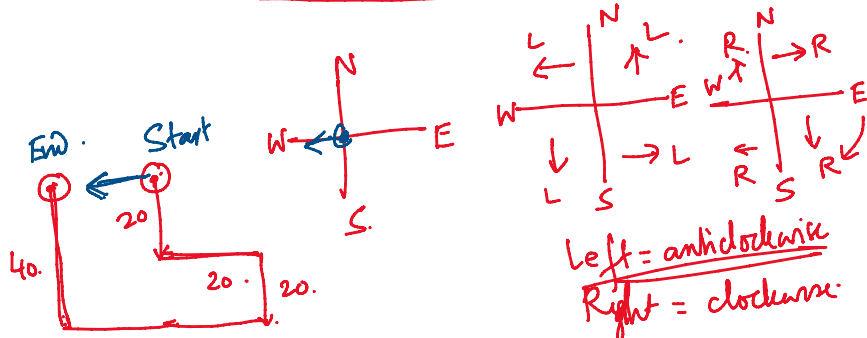
A. 12
B. 13
C. 15
D. Cannot be determined

8. **I am facing East. Turning to the right I go 20 m, then turning to the left I go 20 m and turning to the right I go 20 m, then again turning to the right I go 40 m and then again I go 40 m to the right. In which direction am I from my original position?**
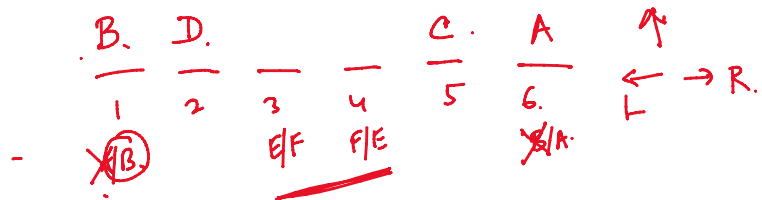
A. North
B. West
C. South
D. East

9. **A river flows west to east and on the way turns left and goes in a semi-circle round a hillock, and then turns left at right angles. In which direction in the river finally flowing?**
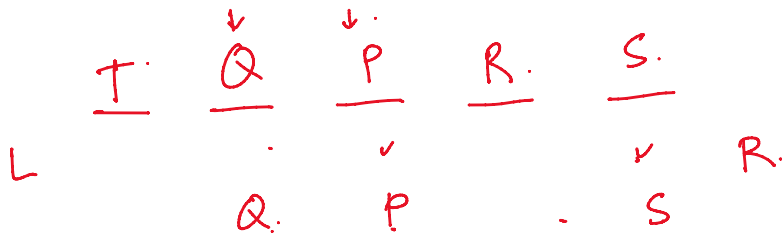
A. West
B. East
C. North
D. South

10. **A, B, C, D, E, and F are sitting in a row. E and F are in the center. A and B are at the ends. C is sitting to the left of A. Who is to the right of B?**

A. D
B. C
C. A
D. F

11. **Q, R, S, and T are sitting on a bench. P is sitting next to Q, R is sitting next to S, S is not sitting with T who is on the left end of the bench. R is in the second position from the right. P is to the right of Q and T. P and R are sitting together. In which position P is sitting?**

A. Between Q and S
B. Between Q and R
C. Between T and S
D. Between R and T

12. Find the missing element in the series given below:

ABD EFH IJL MNP QRT?

A. ZXA
B. WXY
C. XYZ
D. UVX ✓

(handwritten: ABD EFH IJL MNP QRT UVX)

13. Find the missing element in the series given below:

ACE ? MOQ .....SUW

A. EFH
B. GIL
C. GIK ✓
D. GIM

(handwritten: ACE — MOQ SUW)

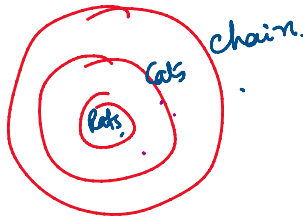*(handwritten: Syllogism. Venn Diagrams.)*

There will be 3 statements that will be given in the questions mentioned below, followed by conclusions: I, II, III, IV. You must accept the provided claims as true, even if they appear to contradict generally known truths. Read the conclusions and then evaluate which of the supplied conclusions logically follows from the given assertions, taking into account widely known facts.

14. Statements: Some dogs are rats. All cats are chairs. All rats are cats.

Conclusion:

I: Some dogs are cats
II: All cats are rats
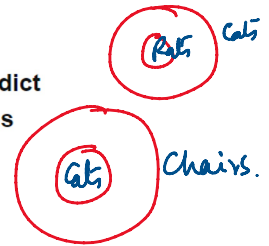III: All chairs are dogs
IV: All cats are dogs

A. Only I & II follow
B. Only II follows
C. Only I & IV follow
D. None of these ✓

(handwritten notes: Cats, chair, Rats; Rats, Dogs, B ⇒ All A are B ⇒ Som B are A; Rats A, Dogs B ⇒ Some A are B ⇒ Some B are A; A B ⇒ No A is B ⇒ No B is A.)
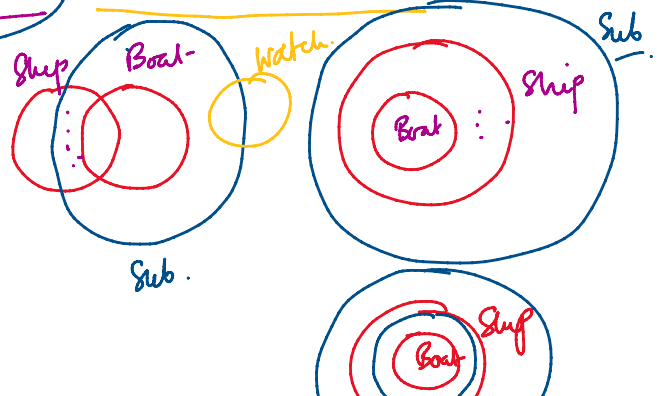
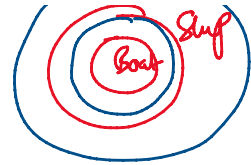**15. Statements: Some ships are boats. All boats are submarines. Some submarines are watches.**
Conclusion:

I. Some watches are boats.
II: Some submarines are boats. ✓
III: Some submarines are ships. ✓
IV: Some watches are ships.

A. All follow
B. Only II and III follow ✓
C. Only III follows
D. Only IV follow

(handwritten notes: Ship, Boat, watch, Sub; B, S; Sub; Sub, Ship, Boat, Ship)

C. Only III follows
D. Only IV follow

Directions (Q1-Q2): Based on the alphanumeric series given below, answer the following questions:

Alphanumeric Series: W % ^ K V P 1 7 E 0 & 2 9 A F Z N 4 * @ U ? M

Q 1. How many numbers in the series are preceded by a vowel?

   1. Four
   2. None
   3. Two
   4. One
   5. Three

Q 2. What is the second element from the right of 7th element from left?

   1. K
   2. V
   3. 1
   4. 7
   5. ?

Q 3. From a certain point, Smriti walks 70 m towards the south. Then, she turns to her right & starts walking straight for another 70 m. Then, again turning to her left he walks for 60 m. She then turns to her left & walks for 70 m. How far is she from the starting point?

   1. 120 m
   2. 135 m
   3. 140 m
   4. 130 m
   5. 125 m

Q 4. In a row of persons, the position of Sakshi from the left side of the row is 26th and position of Sakshi from the right side of the row is 35th. Find the total number of students in the row?

   1. 67
   2. 32
   3. 46
   4. 60
   5. 72

Q 5. In a certain code language, 'ANIMALS' is written as 'SLAMINA'. How is 'ONLINE' written in that code?

    1. ENILNO
    2. OLINEN
    3. LNOINE
    4. NNLOIE
    5. EINONL

Q 6. A family consists of six members Priya, Qureshi, Raj, Xavi, Yusuf and Zain. Qureshi is the son of Raj but Raj is not mother of Qureshi. Priya and Raj are a married couple. Yusuf is the brother of Raj. Xavi is the daughter of Priya. Zain is the brother of Priya. How many children does Priya have?

    1. One
    2. Two
    3. Three
    4. None
    5. Four

Directions (Q 7–Q8). Read the information given below carefully and answer the following questions:

Five friends A, B, C, D and E travelled from Tamil Nadu to five different states Uttar Pradesh, Maharashtra, Rajasthan, Karnataka and Punjab by 5 different modes of transport: Cycle, Bus, Train, Truck, and Bike. The one who travelled to Rajasthan did not travel by Bike. C went to Karnataka by Truck and B went to Maharashtra by Train. D travelled by Bike and E travelled by Bus. Tamil Nadu is not connected by Cycle to Uttar Pradesh and Rajasthan.

Q 7. What means of Transport did C use?

    1. Bus
    2. Cycle
    3. Train
    4. Truck
    5. Bike

Q 8. Which state did E travel to?

    1. Rajasthan
    2. Maharashtra
    3. Karnataka
    4. Uttar Pradesh
    5. Punjab

Directions (Q9-Q10): Read the information given below and answer the following questions:

Pankaj, Qasif, Rajat, Supriya, Tina, Uttkarsh, Vartika, Waseem and Zoya are sitting around a circle facing at the centre. Rajat is third to the right of Zoya who is second to the right of Pankaj. Supriya is not an immediate neighbour of Zoya and Rajat. Tina is third to the left of Supriya. Qasif is third to the right of Waseem who is not an immediate neighbour of Supriya. Vartika is not a neighbour of Zoya.

Q 9. How many people are sitting between Waseem and Supriya (counted clockwise from Supriya)?

    1. One
    2. Four
    3. Five
    4. Two
    5. Three

Q 10. Who is sitting 3rd to the right of Vartika?

    1. Tina
    2. Pankaj
    3. Qasif
    4. Rajat
    5. Zoya

Q.1. Four of the following five are alike in a certain way and so form a group. which one does not belong to that group?

(A) Tooth

(B) Chin

(C) Nose

(D) Ear

(E) Eye

Q.3. Find the missing number in the following series?

3, 5, 5, 19, 7, 41, 9, ?

(A) 71

(B) 61

(C) 79

(D) 69

Q.9. A girl introduced a boy as the son of' the daughter of the father of her uncle. The boy is girl's

(A) Brother

(B) Son

(C) Uncle

(D) Son-in-law