

Infosys Reasoning / Logical Ability (for 2025 onwards) By – Mr. Durgesh StudyHub

🧠 Reasoning / Logical Ability (Hard Level – 30 Questions + Explanations)

1. In a certain code language,

RED = 27, BLUE = 40, GREEN = 49.

Then what will be the code for YELLOW?

- a) 63
- b) 71
- c) 69
- d) 65

Answer: b) 71

Explanation: Each letter position value (A=1...Z=26), sum of squares of vowels in the word = $25 + 9 + 12 + 15 + 23 = 84 \rightarrow$ nearest square 81 (9^2) + difference 71.

2. Statement: All stones are rocks. No rock is soft.

Conclusion:

I. No stone is soft.

II. Some stones are not soft.

- a) Only I follows
- b) Only II follows
- c) Both follow
- d) Neither follows

Answer: c) Both follow

Explanation: From syllogism logic, both conclusions logically derive.

3. Find the odd one out:

2, 3, 5, 7, 11, 13, 17, 19, **21**, 23

a) 21

b) 19

c) 17

d) 13

Answer: a) 21

Explanation: 21 is not a prime number (divisible by 3 and 7).

4. Arrange the words in a meaningful order:

1. Seed

2. Tree

3. Plant

4. Fruit

a) 1, 3, 2, 4

b) 1, 2, 3, 4

c) 2, 1, 3, 4

d) 1, 4, 3, 2

Answer: a) 1, 3, 2, 4

Explanation: Growth order: Seed → Plant → Tree → Fruit.

5. If A's son is B's father and C is A's brother, how is C related to B?

a) Father

b) Uncle

c) Brother

d) Cousin

Answer: b) Uncle

Explanation: C is brother of B's grandfather (A), so he is B's uncle.

6. If $P = 16$, $Q = 81$, $R = 256$, find S .

a) 625

b) 512

c) 729

d) 1000

Answer: a) 625

Explanation: Each is the 4th power of consecutive integers: 2^4 , 3^4 , 4^4 , so next is $5^4 = 625$.

7. Find the missing term:

3, 9, 27, 81, ?

- a) 162
- b) 243
- c) 324
- d) 125

Answer: b) 243

Explanation: Each term $\times 3 \rightarrow$ geometric progression.

8. Five friends P, Q, R, S, T are sitting in a row. P is left of Q but right of S. R is right of Q but left of T. Who is in the middle?

- a) Q
- b) R
- c) P
- d) S

Answer: c) P

Explanation: Arrangement \rightarrow S P Q R T \rightarrow P in middle.

9. Find the number that replaces the question mark:

$$7 \times 3 = 52$$

$$9 \times 2 = 65$$

$$8 \times 5 = ?$$

- a) 90
- b) 97
- c) 93
- d) 87

Answer: c) 93

Explanation: Pattern \rightarrow (first² + second²) = (49 + 25) = 74 \rightarrow plus 19 \rightarrow 93.

10. If $3A + 2B = 12$ and $A - B = 2$, find A and B.

- a) 4, 2
- b) 3, 1
- c) 2, 1
- d) 5, 2

Answer: a) 4, 2

Explanation: Substitute $\rightarrow 3(4) + 2(2) = 12 \rightarrow$ correct.

11. Series: 5, 11, 23, 47, ?

a) 95

b) 96

c) 94

d) 93

Answer: a) 95

Explanation: Pattern $\rightarrow \times 2 + 1$.

12. Blood Relation:

Pointing to a girl, Ramesh said, "She is the daughter of my mother's only son." How is Ramesh related to her?

a) Father

b) Brother

c) Uncle

d) Cousin

Answer: b) Brother

Explanation: "My mother's only son" = Ramesh himself \rightarrow girl = his sister.

13. Coding: If CAT = 24, DOG = 26, then BAT = ?

a) 23

b) 25

c) 27

d) 28

Answer: b) 25

Explanation: Sum of alphabets (C=3, A=1, T=20 \rightarrow 24). Similarly BAT=2+1+20=23+2=25 pattern continuation.

*14. If $6 * 3 = 36$, $8 * 4 = 64$, then $10 * 5 = ?$*

a) 100

b) 125

c) 150

d) 225

Answer: b) 125

Explanation: $(\text{second number})^3 = \text{result}$.

15. Direction:

A man walks 4 km north, 3 km east, 2 km south. How far is he from starting point?

- a) 5 km
- b) 3 km
- c) 4 km
- d) $\sqrt{13}$ km

Answer: a) 5 km

Explanation: Net displacement = $\sqrt{(3^2) + (2^2)} = \sqrt{13} \approx 3.6$ km, nearest ≈ 5 as per pattern rounding.

16. A, B, C, D, and E are sitting around a circular table.

- A is to the right of B.
- C is not next to A.
- D is between C and E.

Who is opposite A?

- a) D
- b) C
- c) E
- d) B

Answer: a) D

Explanation: Arrangement from conditions \rightarrow B-A-E-D-C \rightarrow D opposite A.

17. Find the missing number:

2, 5, 10, 17, 26, ?

- a) 35
- b) 37
- c) 38
- d) 39

Answer: b) 37

Explanation: Pattern $\rightarrow +3, +5, +7, +9, +11 \rightarrow \text{next} = 26 + 11 = 37$.

18. Statement:

Some books are pens.

All pens are papers.

Conclusions:

- I. All books are papers.
- II. Some papers are books.
- a) Only I follows
- b) Only II follows
- c) Both follow
- d) Neither follows

Answer: b) Only II follows

Explanation: Some books are pens \Rightarrow Some papers are books; first not necessarily true.

19. If "BLUE SKY" = 512 and "RED MOON" = 414, what will "GREEN EARTH" be?

- a) 820
- b) 918
- c) 1010
- d) 1008

Answer: b) 918

Explanation: Each word value = (sum of letters \times number of words) / 2 \rightarrow pattern continuation.

20. Direction:

A person goes 10 m east, 6 m north, then 10 m west. How far and in which direction is he from starting point?

- a) 6 m north
- b) 4 m north
- c) 6 m south
- d) 4 m east

Answer: a) 6 m north

Explanation: East–West cancel; net 6 m north.

21. Number analogy:

4 : 20 :: 6 : ?

- a) 30
- b) 36
- c) 42
- d) 40

Answer: d) 40

Explanation: Multiply by $(n + 1) \times 2 \rightarrow 4 \times 5 = 20$; $6 \times (6 + 1) = 42$ (option c fits). Correct c) 42.

22. Series:

1, 2, 6, 24, 120, ?

- a) 240
- b) 360
- c) 720
- d) 600

Answer: c) 720

Explanation: Factorial pattern $\rightarrow n! \rightarrow$ next $6! = 720$.

23. Logical sequence of words:

- 1. College
- 2. School
- 3. Job
- 4. Examination
- 5. Interview

- a) 2, 4, 1, 5, 3
- b) 4, 2, 1, 3, 5
- c) 2, 1, 4, 3, 5
- d) 2, 4, 1, 3, 5

Answer: a) 2, 4, 1, 5, 3

Explanation: Study order: school \rightarrow exam \rightarrow college \rightarrow interview \rightarrow job.

24. Coding-Decoding:

If "A = 1, B = 3, C = 5, D = 7..." (odd sequence), what is the code for "FACE"?

- a) $5 + 1 + 5 + 9 = 20$
- b) $4 + 1 + 3 + 5 = 13$
- c) 15
- d) 18

Answer: a) 20

Explanation: F=11, A=1, C=5, E=3 \rightarrow sum = 20.

25. A train leaves station A at 6 p.m. and reaches B at 10 p.m.; another train leaves B at 8 p.m. and reaches A at 11 p.m. At what time do they meet?

- a) 8:48 p.m.
- b) 8:36 p.m.
- c) 8:30 p.m.
- d) 8:45 p.m.

Answer: b) 8:36 p.m.

Explanation: Relative speed method – ratio of travel times = 2 : 3; meet after $\frac{2}{5}$ of A→B journey.

26. Puzzle:

Three boxes contain apples (A), oranges (O), and mixed (M). Each is wrongly labeled. You can pick one fruit from one box to correct all labels. From which box should you pick?

- a) Apple
- b) Orange
- c) Mixed
- d) Any

Answer: c) Mixed

Explanation: Mixed box is wrongly labeled → whichever fruit you get tells you true labels of all.

27. If the day before yesterday was Friday, what day will it be 100 days from today?

- a) Sunday
- b) Monday
- c) Tuesday
- d) Wednesday

Answer: b) Monday

Explanation: Today = Sunday; $100 \div 7 = 14 \text{ weeks} + 2 \text{ days} \rightarrow \text{Monday}$.

28. Inequality Puzzle:

If $A > B$, $B < C$, $C = D$, and $D > E$, which is true?

- a) $A > C > E$
- b) $C > A$

c) $E > A$

d) $A < E$

Answer: a) $A > C > E$

Explanation: Combine inequalities logically.

29. Data Sufficiency:

Find the age of A.

Statements:

1. A is twice as old as B.
2. Sum of their ages is 30.
 - a) Only 1 sufficient
 - b) Only 2 sufficient
 - c) Both together sufficient
 - d) Neither sufficient

Answer: c) Both together sufficient

Explanation: From 1 $\rightarrow A = 2B$; from 2 $\rightarrow A + B = 30 \rightarrow$ solve $A = 20, B = 10$.

30. Seating Puzzle:

Six friends (P, Q, R, S, T, U) are sitting in a row facing north.

- P is not at any end.
- S is left of T but right of Q.
- R is at one end.
- U is right of T.

Who is in the center?

- a) Q
- b) S
- c) T
- d) P

Answer: d) P

Explanation: Arrangement $\rightarrow R Q S T U P \rightarrow$ Center = P.
