

How to use this sheet. Draw a family tree for every question — one row per generation, spouses beside each other, children on the row below. Mark gender with + and – the moment a relation term fixes it. Blank titled boxes are left after the harder sets. Target time is 50 seconds per question.

Section A · Multiple choice questions

Choose the single correct option in each case.

- How is your father's mother's only daughter-in-law related to you?
(1) Aunt (2) Mother (3) Grandmother (4) Sister
- How is your mother's father's only son related to you?
(1) Father (2) Brother (3) Maternal uncle (4) Paternal uncle
- A is the son of B. C is the sister of A. D is married to C. How is D related to B?
(1) Son (2) Son-in-law (3) Brother-in-law (4) Nephew
- Pointing to a boy, a woman said, "He is the son of my mother's only son." How is she related to him?
(1) Mother (2) Aunt (3) Sister (4) Grandmother
- Which of these terms never reveals gender?
(1) Niece (2) Cousin (3) Nephew (4) Daughter-in-law
- P's father's sister's husband is Q. How is Q related to P?
(1) Maternal uncle (2) Uncle by marriage (3) Grandfather (4) Brother
- A family has A and his wife B, their sons C and D, and C's daughter E. How many generations does it span?
(1) One (2) Two (3) Three (4) Four
- R is the son of S. S is the daughter of T. T has two children, S and U. U's daughter is V. How is V related to R?
(1) Sister (2) Niece (3) Cousin (4) Aunt

Family tree space — Questions 3 and 8 *One row per generation. Label every person and mark + or –.*

Section B · Assertion and reason

Mark (a) both true and reason explains assertion, (b) both true but reason does not explain, (c) assertion true reason false, (d) assertion false reason true.

- Assertion:** A brother's son and a sister's son are both nephews.
Reason: The sibling's gender does not change the term used for their child.
- Assertion:** A son-in-law belongs to the same generation row as his wife.
Reason: Marrying into a family never adds a generation.
- Assertion:** "The only daughter of my mother" spoken by a woman refers to the speaker herself.
Reason: The word "only" removes the possibility of another daughter.
- Assertion:** In a coded chain, a symbol may link two names that are not adjacent to it.
Reason: Coded chains are read as a whole rather than symbol by symbol.

Section C · Match the following

Column I — description	Column II — relation
(a) Mother's brother	(i) Nephew
(b) Father's father	(ii) Maternal uncle
(c) Sister's son	(iii) Daughter-in-law
(d) Son's wife	(iv) Paternal grandfather

Answer: (a) _____ (b) _____ (c) _____ (d) _____

Section D · Fill in the blanks

13. In standard notation, a double horizontal line represents _____.
14. The number of generations in a family equals the number of _____.
15. "The only daughter of my mother", spoken by a woman, refers to _____.
16. A relation traced through the mother's side is called _____.
17. A relation term that fixes the person as male is _____ (give any one).

Section E · True or false

18. A cousin's gender can always be determined from the word "cousin". (True / False)
19. A spouse occupies the same generation row as their partner. (True / False)
20. In a coded chain, each symbol links only the two names touching it. (True / False)
21. Photograph questions are best solved by starting from the speaker. (True / False)
22. A brother's son and a sister's son are described by the same term. (True / False)

Working space — Sections D and E

Sketch the tree that justifies each answer.

Section F · Short answer

Two to three sentences each.

23. List the six standard family tree symbols and state what each represents.
24. Explain why "spouses sit, children drop" prevents generation-counting errors.
25. Give two relation terms whose gender is fixed and two whose gender is not.
26. Why is it safer to work a photograph question backwards from the photo rather than forwards from the speaker?

Section G · Long answer

27. Set out the full four-step backwards method for photograph questions, then apply it to: "Pointing to a lady, a man said, 'Her mother's only son is my father's only son.'" Show every intermediate step.

28. Explain the translate-then-draw method for coded chains, then apply it to a five-symbol chain of your own construction, writing out each plain sentence before you draw.

Family tree space — Question 27

Photo person at the bottom, speaker built upwards.

Section H · HOTS — higher order thinking

29. A chain gives six people and four relations, and two different family trees satisfy all of them. Construct such a case and explain what extra information would make the answer unique.

30. Design a coded-symbol question whose correct answer is "cannot be determined", and justify why nothing in the chain fixes the gender.

31. A candidate counts five generations in a family of five people. Explain the error they have almost certainly made, and state the rule that prevents it.

Working space — Question 29

Draw both possible trees side by side and mark where they differ.

Section I · Previous year exam style

Questions 32 and 33 appeared in the AAI ATC Junior Executive paper. Attempt them under time.

Key for Questions 32 and 34 — 'A + B' = A is the brother of B · 'A - B' = A is the sister of B · 'A / B' = A is the husband of B · 'A ! B' = A is the mother of B · 'A x B' = A is the wife of B · 'A * B' = A is the father of B

32. How is O related to P if 'S x T * O - P ! V' ?

(1) Sister (2) Daughter (3) Mother's mother (4) Mother [PYQ 2025 · Shift 1]

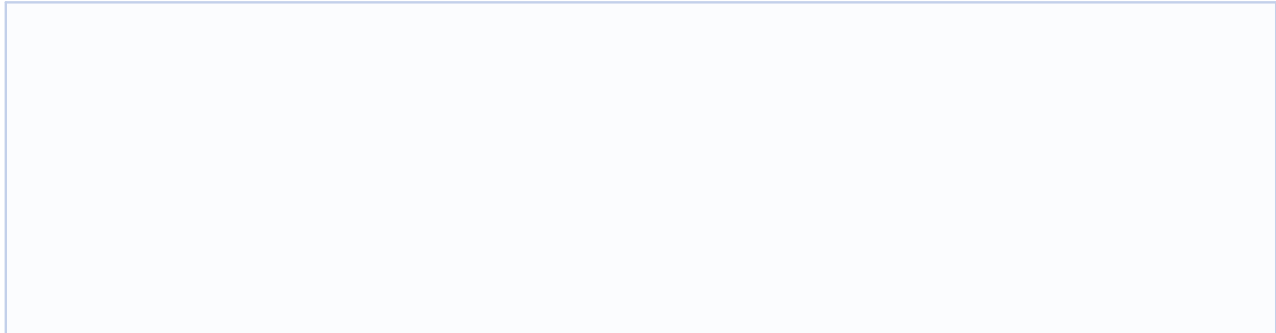
33. 'P ÷ Q' means P is the son of Q, 'P - Q' means P is the husband of Q, 'P x Q' means P is the brother of Q, 'P + Q' means P is the wife of Q. If 'J ÷ H + M ÷ S - F', then how is F related to J?

(1) Grandfather (2) Grandmother (3) Mother (4) Grandson [PYQ 2021 · Shift 2]

34. Using the key above, how is S related to V in the same chain 'S x T * O - P ! V' ?

(1) Mother (2) Grandmother (3) Aunt (4) Sister [ATC Pattern]

Family tree space — Questions 32 to 34 *Translate each symbol into a sentence first, then draw.*



Section J · Mixed revision test

Ten questions. Eight minutes. No calculator, no phone.

35. A is the sister of B. B is the son of C. C is the mother of D, who is male. How is A related to D?
36. P is the child of Q. Q is the child of R. R has only one daughter, S, who has no children. How is P related to S?
37. M is the father of N. N is the sister of O. O is married to P. P is the mother of Q. How is M related to Q?
38. Pointing to a photograph, a man said, "She is the daughter of my grandfather's only son." How is she related to him?
39. Pointing to a man, a woman said, "His mother is the only daughter of my mother." How is she related to him?
40. A and B are a married couple and parents of C and D. C is married to E, and they have a son F. How is B related to F?
41. In a family of six with two married couples, K is the grandmother of L and mother of M. N is the wife of M and mother of L. How is L related to K's husband?
42. P is the brother of Q. Q is the mother of R. R is married to S. T is the father of S. How many generations are there?
43. Pointing to a woman, a man said, "Her father's only sister is my mother's mother." How is she related to him?
44. X's mother's brother's wife is Y. How is Y related to X?

Stuck on any of these? Bring them to a live class.

Live online batches and 1-on-1 mentoring for AAI ATC Junior Executive — every reasoning, aptitude, English and GK topic taught with this same draw-it-first method. Fees are kept deliberately low so any serious aspirant can join.

Enquiry form via aviatelearnings.com · Telegram: t.me/aaiatc2026kanishk · YouTube: youtube.com/@AAIATCEXamPrep