AGE PROBLEMS

(1) Like term → Question

(2) Tense sense → state ① present tense = x

② ↳ past (5 yrs ago) = x − 5

↳ Future (in 6 yrs) = x + 6

Father − Son = Birth

Birth → 0

Q1. A father said to his son, "I was as old as you are at the present at the time of your birth". If the father's age is 38 years now, the son's age five years back was?

A. 14 years
B. 19 years
C. 33 years
D. 38 years

Let the son's present age be 'x' ⇒ $38 - x = x$

$38 = 2x$

$x = 19$

$x = 14$

present $38 - x = x$

Q2. Present ages of William and Alex are in the ratio of 5 : 4 respectively. Three years hence, the ratio of their ages will become 11 : 9 respectively. What is Alex's present age in years?

A. 24 years
B. 27 years
C. 40 years
D. None

Future

Let present ages: $5x, 4x$

Future then = $5x+3 : 4x+3 :: 11 : 9$

$\Rightarrow \frac{5x+3}{4x+3} = \frac{11}{9}$

$9(5x+3) = 11(4x+3)$

$45x + 27 = 44x + 33$

$45x - 44x = 33 - 27$

$x = 6$

$4x \Rightarrow 4(6) = 24$ yrs

Alex's age

19 − 5 = 14

present ⊕ Future small → Multiple

Q3. A man is 24 years older than his son. In two years, his age will be twice the age of his son. The present age of his son is:

A. 14 years
B. 18 years
C. 20 years
D. 22 years

⇒ let Son's age = x,
Father's age = $x + 24$ → older

→ Future yrs

② In $2(x + 2) = (x + 24) + 2$

⇒ $2x + 4 = x + 26$

$2x - x = 26 - 4$

$= \boxed{x = 22}$

Q4. The sum of the present ages of a father and his son is 60 years. Six years ago, father's age was five times the age of the son. After 6 years, son's age will be:

A. 12 years
B. 14 years
C. 18 years
D. 20 years

present – past (6)

Fath + Son = 60

① ⇒ Son's age = x
Father's age = $60 - x$ = 40

[Father = 60 − x

② $(60 - x) - 6 = 5(x - 6)$

⇒ $54 - x = 5x - 30$

$6x = 84$

$\boxed{x = 14}$ present

$x = 14 + 6$
= 20 yrs.

Blood Relations

① Upper Gen : parents, G.P, Uncles, Aunt, Father in-law etc

② Our generation: self, siblings, cousins, brother in-law etc

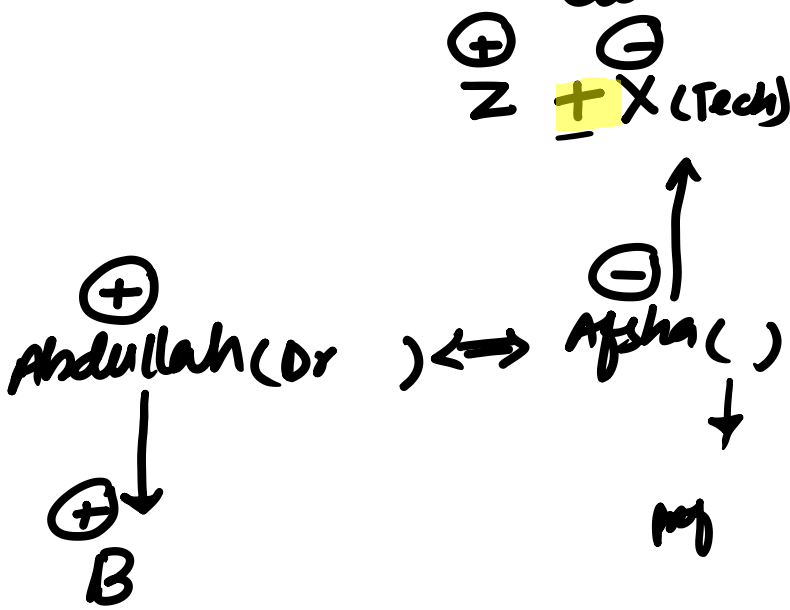
③ lower generation: children, Nephew, son-in-law etc

⊕⊖ → Gender ∪ →

( ) → profession

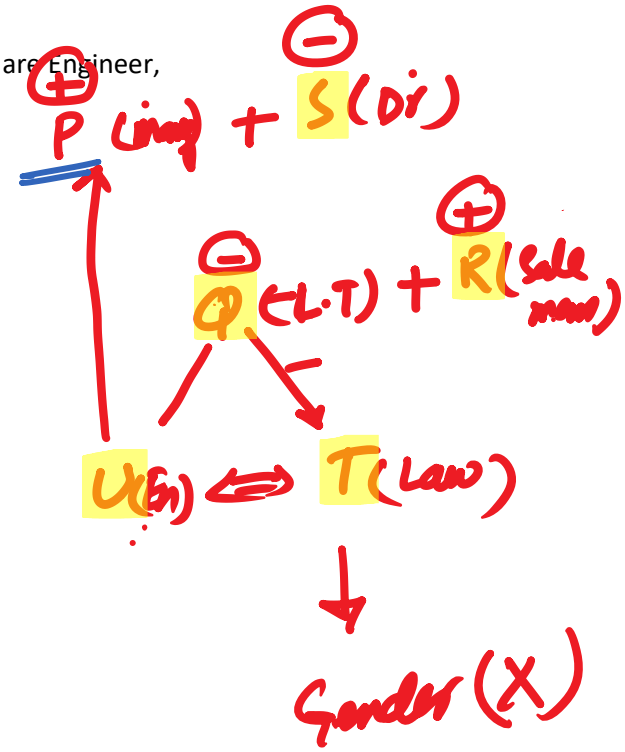
⇄ ⇉ brother/sister ∩ →

+ → Husband-wife _ L →



Read the following information carefully and then answer the questions (Q.No1 to 4) based on it:

There is a family of six persons P, Q, R, S, T and U. Their professions are Engineer, Doctor, Teacher, Salesman, Manager and Lawyer.



1). There are two married couples in the family.

2). The Manager is the grandfather of U, who is an Engineer

3). R, the Salesman, is married to the lady Teacher

4). Q is the mother of U and T.

5). The Doctor, S is married to the Manager.

Q1. How many male members are there in the family?

A. Two
B. Three
C. Data inadequate
D. Four

Q2. What is the profession of P?

A. Lawyer
B. Lawyer or Teacher
C. Manager
D. None of these

Q3. Who are the two married couples in the family?

A. PQ and SR
B. PS and RQ
C. PT and SR
D. None of these

Q4. How P is related to T?

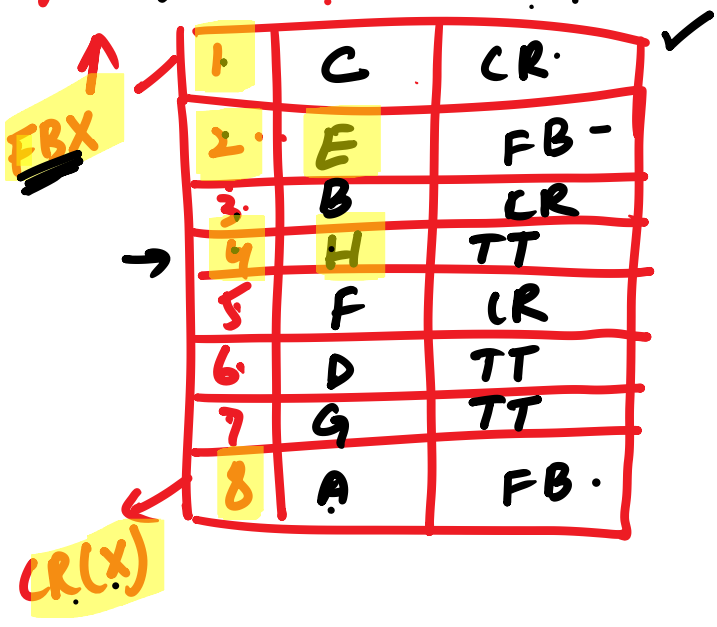
A. Father
B. Grandfather
C. Mother
D. Grandmother

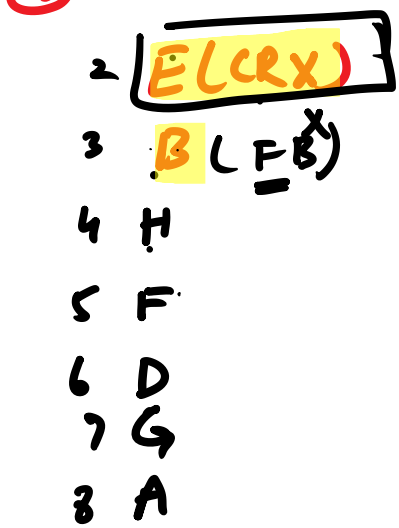
Comparison based

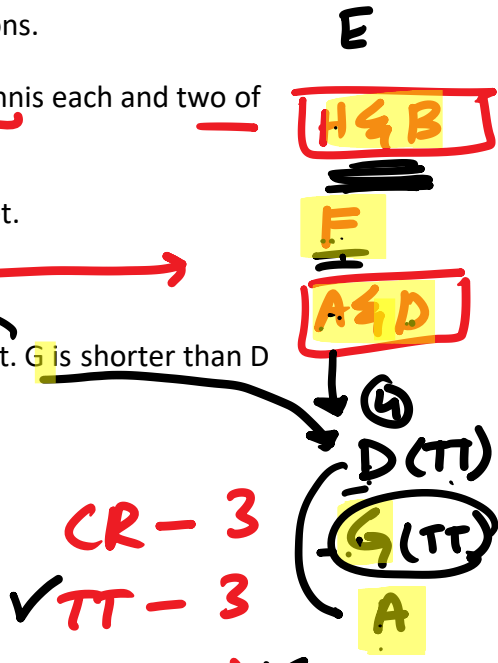
Read the following statement carefully and answer the following questions.

A,B,C,D,E,F,G,H are eight friends, three of them play cricket and table tennis each and two of them play football. Each one of them has a different height.

1. The tallest does not play football and the shortest does not play cricket.
2. F is taller than A and D but shorter than H and B.
3. E who does not play cricket, is taller than B and is second to the tallest. G is shorter than D but taller than A.
4. H, who is fourth from the top, plays table tennis with D.
5. G does not play either cricket or football, B does not play football.







Q1. Who is the tallest?

A. B

B. C

C. H

D. Data inadequate

Q2. Who is the shortest?

A. G

B. D

C. A

D. Data inadequate

Q3. Which of the following pairs of friends play football?

A. EF

B. EA

C. HF

D. Data inadequate

Q4. What is F's position from the top when they arranged in descending order of their height?

A. Fifth

B. Fourth

C. Sixth

D. Data inadequate

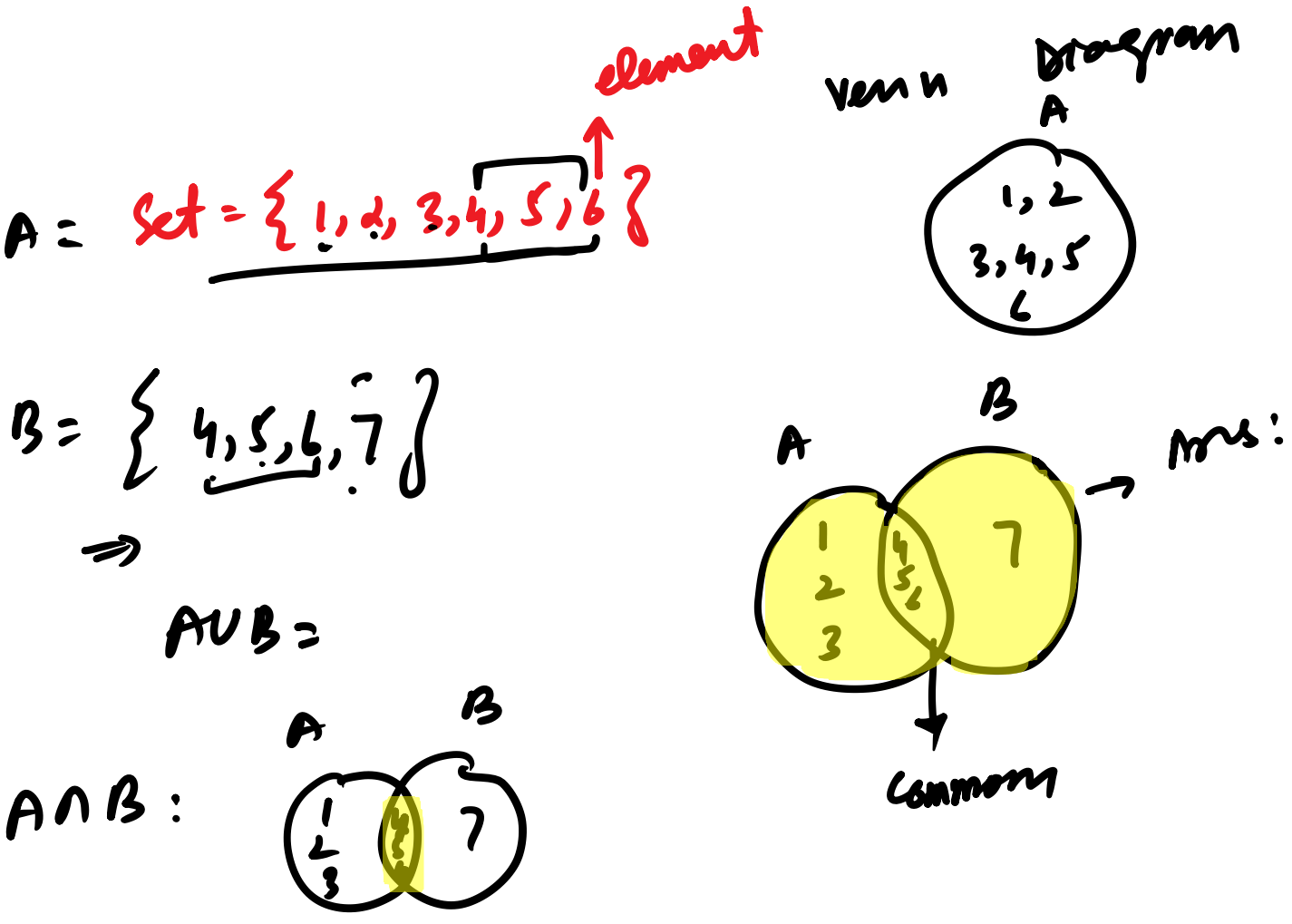
Q5. Which of the following group of friends play cricket?

A. CAE

~~B. CBF~~

C. CBA

D. Data Inadequate

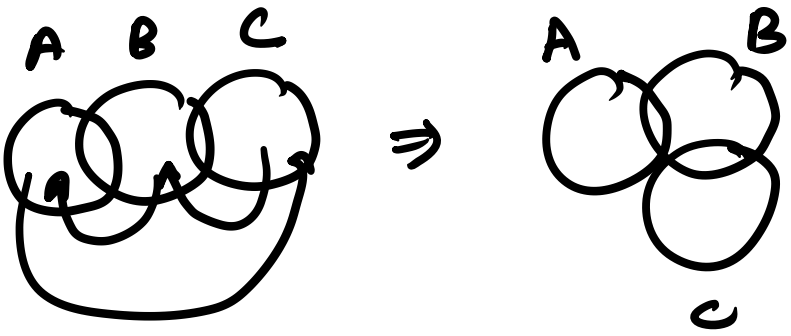


eg ① A belongs to B. B belongs to C. Therefore A Belongs to C.

⇒

A = B
B = C
A = C

Logics (Venn diagram)



(1) premises (1 & II) True → conclusion True → valid

True & False → Invalid

(2) premises (False) → conclusion (F) Valid

(1)-T (2)-T

Q1. Most corporation lawyers are conservatives. Miriam Graf is a corporation lawyer. Therefore Miriam Graf is probably a conservative. → C → True

A. False
B. True
C. Both
D. None

Louis Done

P-1 T P-2 T C True

Q2. All mammals have lungs. All whales are mammals. Therefore all whales have lungs.

A. Valid
B. Invalid
C. Both
D. None

(valid)

P-1 — True (+)
P2 → True (+)
C → True (+)

P-(1) — False
P-(2) — False
C → (+) False

→ valid

Q3. All four-legged creatures have wings. All spiders have exactly four legs. Therefore all spiders have wings.

A. Invalid
B. Valid
C. Both
D. Uncertain

Q4. If I owned all the gold in Fort Knox, then I would be wealthy. I do not own all the gold in Fort Knox. Therefore I am not wealthy.

A. Valid
B. Invalid
C. Certain
D. Uncertain

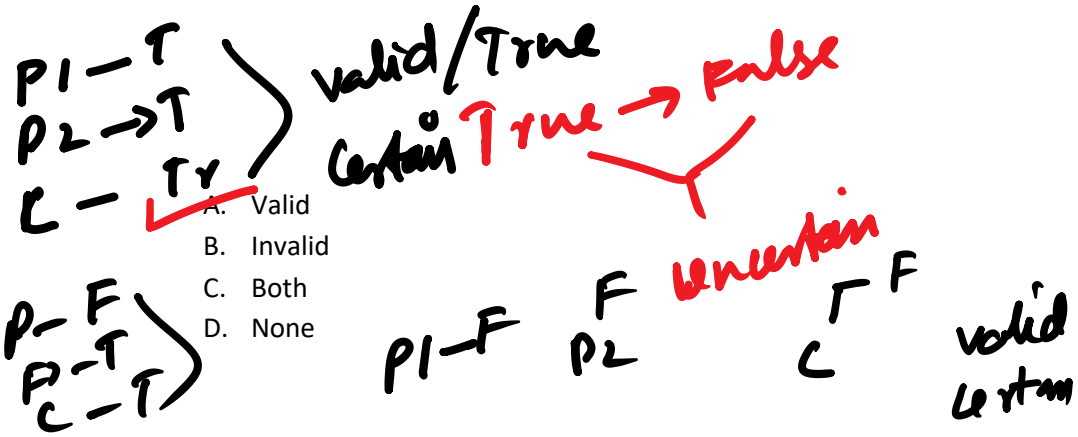
Q5. If Bill Gates owned all the gold in Fort Knox, then Bill Gates would be wealthy. Bill Gates does not own all the gold in Fort Knox. Therefore Bill Gates is not wealthy.

A. Valid
B. Invalid
C. Both
D. None

Q6. All fishes are mammals. All whales are fishes. Therefore all whales are mammals.

A. Valid
B. Invalid
C. Certain
D. Uncertain

Q7. All mammals have wings. All whales have wings. Therefore all mammals are whales.



A. Valid
B. Invalid
C. Both
D. None