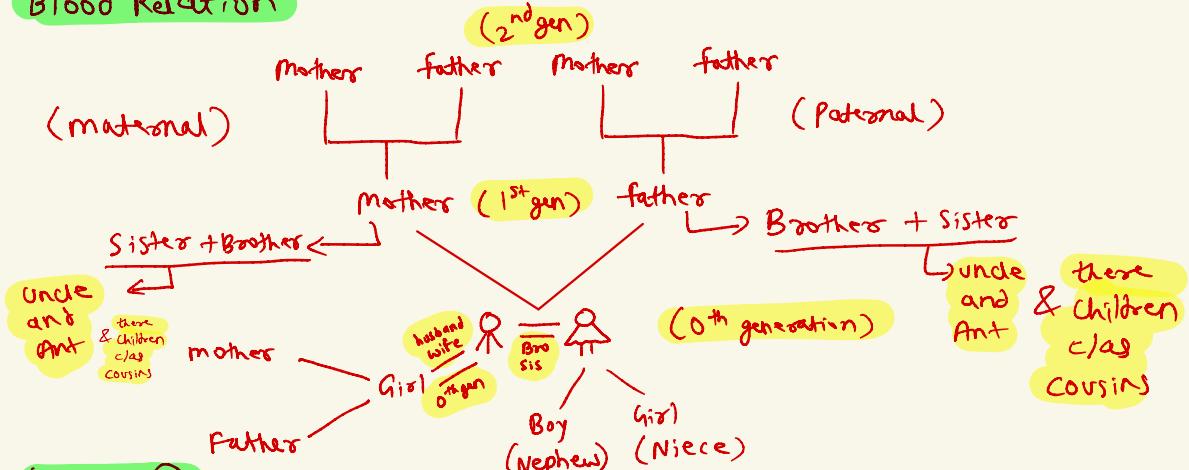


Aptitude Practice

Blood Relation



Lesson ①

Family Tree

* A is father of B



* A is brother of B



* A is wife of B



* A is son of B



* A is grandfather of B



↑ : 1st gen

↓ : 0th gen

— : Bro + Sis

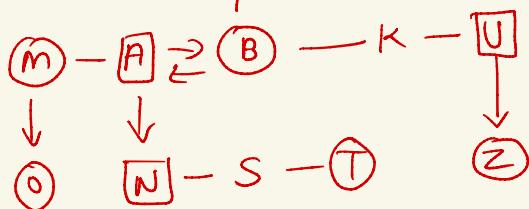
↔ : Husband + wife

□ : Male

○ : Female

↑ : 2nd gen

①



① A → S : Either Son or Daughter

② N → M : Aunt

③ F → N : Grand Son

④ C → S : Either Grand Son or Grand Daughter

⑤ K → A : Brother in law

⑥ B → M : Sister in law

⑦ A → K : either Brother in law or Sister in law

⑧ A → F : Father in law

⑨ A → O : Niece

⑩ N → P : Maternal Grand Aunt

Lesson ②

- ② In a family of six person A, B, C, D, E & F they are two married couples
D is grandmother of A and mother of B
C is wife of B and mother of F
F is granddaughter of E

$$\textcircled{D} \Leftrightarrow \boxed{E}$$

$$\begin{matrix} \uparrow \\ \boxed{B} \end{matrix} \Leftrightarrow \textcircled{C}$$

$$\begin{matrix} \uparrow \\ \textcircled{A} \\ \uparrow \\ \textcircled{F} \end{matrix}$$

Ques

- ① How is A related to F? → Sister Brother
② How is C related to D? → Daughter in law
③ A is F's? → Grandson Granddaughter

- ③ A is mother of B. B is sister of C. D is son of C. E is brother of D. F is mother of E. G is daughter of B. H has only two children B and C.

$$\textcircled{A} \Leftrightarrow \boxed{H}$$

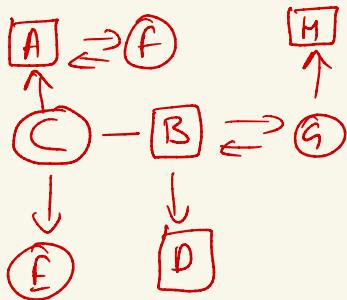
$$\begin{matrix} \uparrow \\ \boxed{B} - \boxed{C} \end{matrix} \Leftrightarrow \textcircled{F}$$

$$\begin{matrix} \downarrow \\ \textcircled{G} \end{matrix} \quad \begin{matrix} \downarrow \\ \boxed{D} - \boxed{E} \end{matrix}$$

Ques

- ① How F related to H? → Daughter in law
② How is C related to E? → Father
③ How B related to F? → Sister in law

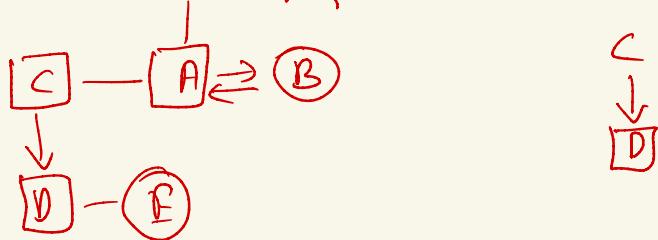
④ A is father of C. But C is not his son. F is the daughter of C. F is the spouse of A. B is brother of C. D is son of B. G is spouse of B. H is father of G.



Ques ① Who is grandmother of D? → F

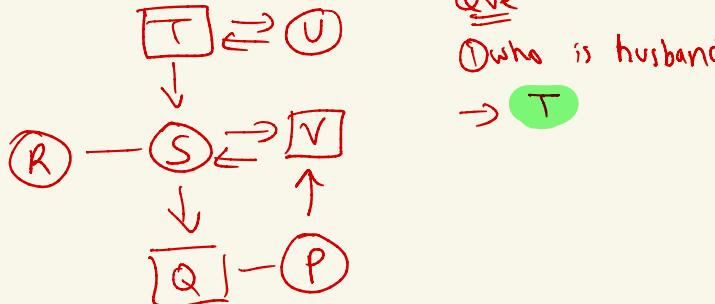
② Who is son of F? → B

⑤ In a family are six members A/B/C/D/E and F. A & B are married couple, A being a male member. D is the only son of C, who is the brother of A. F is sister of D. B is daughter-in-law of F, whose husband has died?



Ques ① How many male members are there?
→ (a) 3 (b) 4

⑥ There are 7 family members P, Q, R, S, T, U and V in which they are two married couples. P is sister of Q, who is maternal grandson of T. The father of S has two maternal grandchildren. R is sister-in-law of V, who is father of P. V is a female

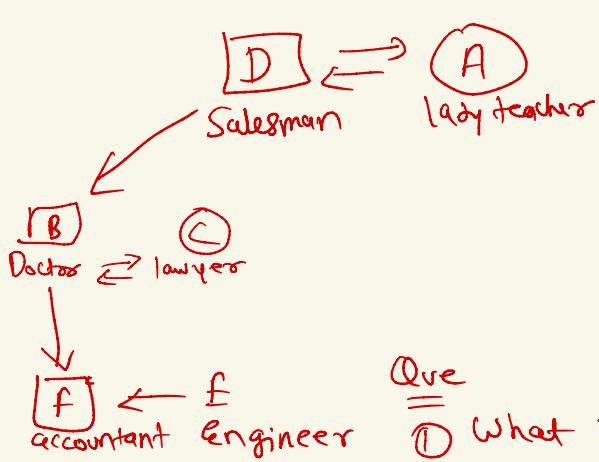


Ques

Who is husband of V?

→ T

⑦ Salesman, engineer and accountant. There are two married couples in a family. D, the salesman married to lady teacher. The doctor is married to the lawyer. F, the accountant is the son of B and brother of E. C, the lawyer is daughter-in-law of A. F is unmarried Engineer. A is the grandmother of F.



Doctor → Lawyer

B
F
accountant

Ques

What is the profession of B?

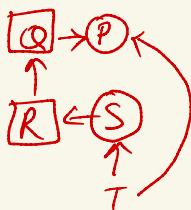
→ Doctor

Lesson ③ Equation Based Question

① $P \times Q / R - S + T$

2nd gen

$$\begin{array}{ccccccc} & \swarrow & \downarrow & \downarrow & \downarrow & & \\ \text{gen} & 0 & 1 & 0 & 1 & = 2 & \end{array}$$



- $A * B$ A is sister of B
- $A + B$ A is mother of B
- A / B A is father of B
- $A - B$ A is brother of B

① $P \times Q / R - S + T$ then P is T's ?
→ Grand aunt

② Which of ^{gen} following is P is aunt of T ?

→ $P \times Q / R \times S - T$

$$\begin{array}{ccccccc} & \swarrow & \downarrow & \downarrow & \downarrow & & \\ \text{gen} & 0 & 1 & 0 & 0 & = 1 & \end{array}$$

③ $P \times Q - R / S - T \times U$

3rd gen

$$\begin{array}{ccccccc} & \swarrow & \downarrow & \downarrow & \downarrow & \downarrow & \\ \text{gen} & 0 & 0 & 1 & 0 & 0 & = 1 & \end{array}$$

→ P is U's ?

can't determine with short cut

- (a) father (b) mother (c) aunt
- (d) maternal Aunt (e) grand mother

- $A * B$ A is sister of B
- $A + B$ A is mother of B
- A / B A is father of B
- $A - B$ A is brother of B

- $A \times B$ A is sister of B
- $A + B$ A is mother of B
- A / B A is father of B
- $A - B$ A is brother of B

④ $A @ B \$ C \times D$

How B is related to D ?

2nd gen

$$\begin{array}{ccccc} & \swarrow & & & \\ \text{gen} & 1 & & & \\ \text{orthogen} & & & & \\ \uparrow & & & & \\ \text{1st gen} & & & & \\ \downarrow & & & & \\ \text{2nd gen} & & & & \end{array}$$

3rd gen

$$\begin{array}{ccccc} & \swarrow & & & \\ \text{gen} & 1 & & -1 & = 0 \\ A @ B \$ C \times D & & & & \end{array}$$

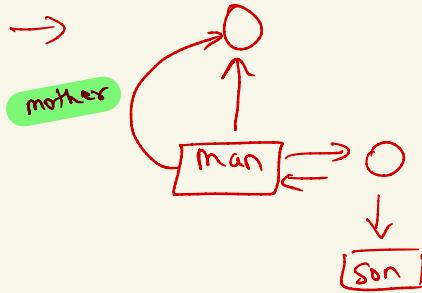
→ Ans Husband

- $P \$ Q$ P is father of Q
- $P \times Q$ P is daughter of Q
- $P @ Q$ P is sister of Q

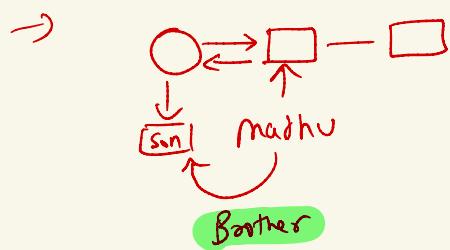
Ans Husband

Lesson ④ Pointing to a person

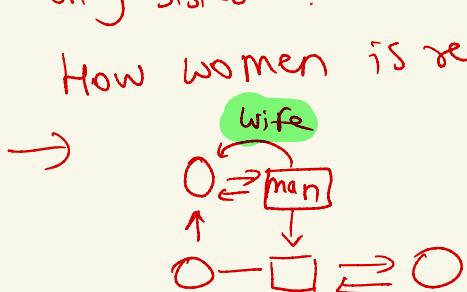
① Pointing to a women in a photograph a man says "She is the mother of the father of my wife's only Son". How is the women related to man?



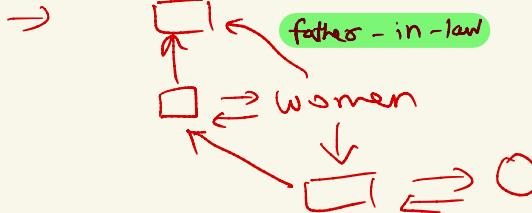
② Pointing to a Joker, Madhu says "He is the son of my fathers brother only sister-in-law".
How Joker is related to madhu?



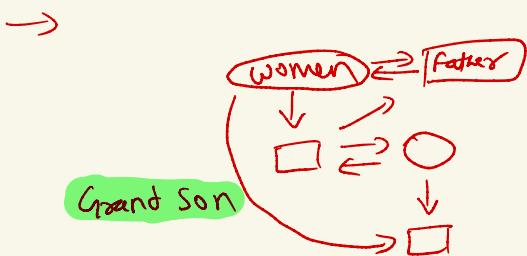
③ Pointing to a women in a photograph a man says "She is the mother of my daughter-in-law's husband only Sister"?
How women is related to man?



④ Pointing to a man in a photograph a women says "He is the father of my only daughter-in-law's father-in-law".
How man is related to women?



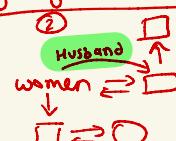
⑤ Pointing to a man in a photograph a women says "He is the only son of the only daughter-in-law of my only son's father".
How man is related to women?



⑥ Pointing to women in a photograph a man says "She is the sis-in-law of the only daughter of my mother-in-law's husband".
How women is related to men?

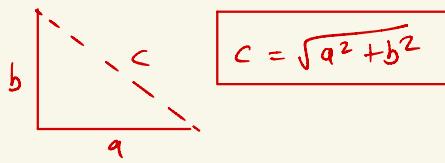


⑦ Pointing to a man in a photograph a women says "He is the father-in-law of the wife of the only grandson of my own father-in-law".
How man related to women?

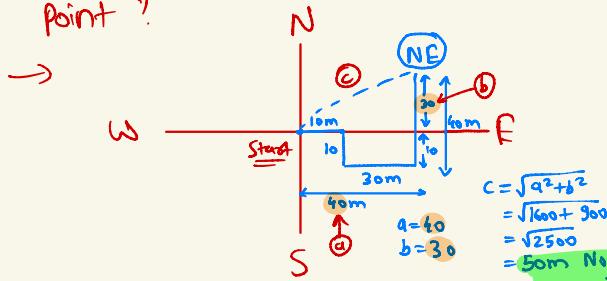


Direction

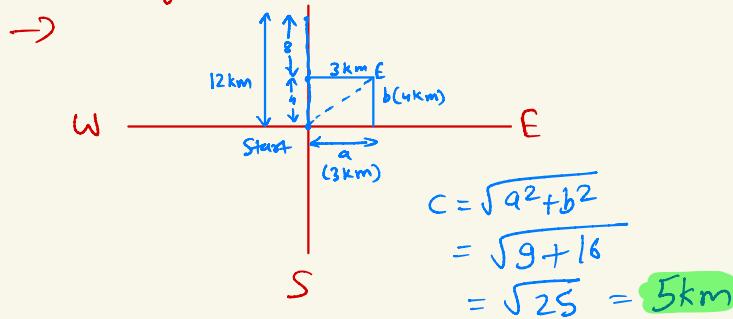
Pythagoras theorem



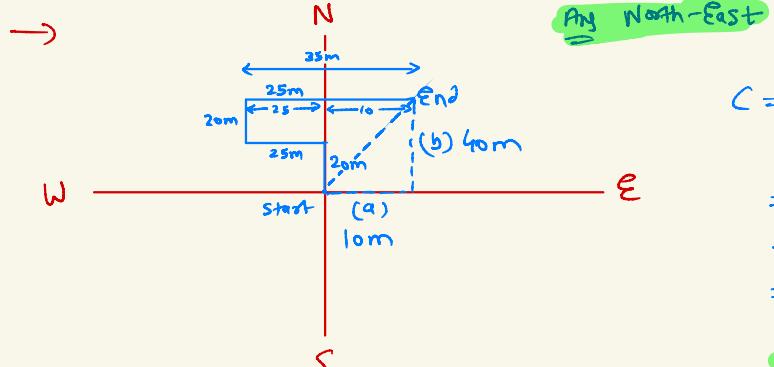
① Ram started walking towards East. After walking 10m he took a right turn and walked 10m. He took a left turn and walked 30m and again took a left turn and walked 40m. Now ram how far and which direction from starting point?



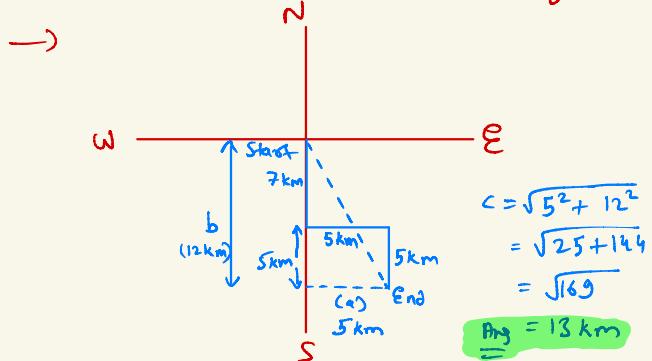
② Kamal goes 12 km towards north from a fixed point and then goes 8 km towards south from there. In the end he goes 3 km towards east. How far is he from starting point?



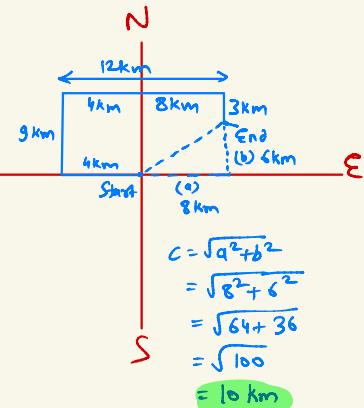
③ A person starts walking in north direction and after travelling a distance of 20m takes a left turn and walks 25m. From here he took a right turn and walked 20m and finally took a right turn and walked 35m. How far is he from starting point and in which direction?



④ Pankat travels 7 km towards South and then 5km towards his left, he further travels 5km towards South. How far is he from starting point?

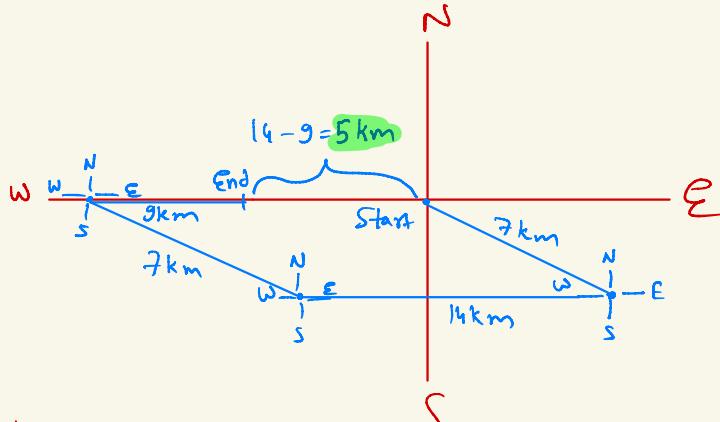


⑤ A person walks 4km towards west then turns to his right to travel 9km, he turns towards east and travel 12km. Finally he travelled 3km towards south. How far he is from the initial position?

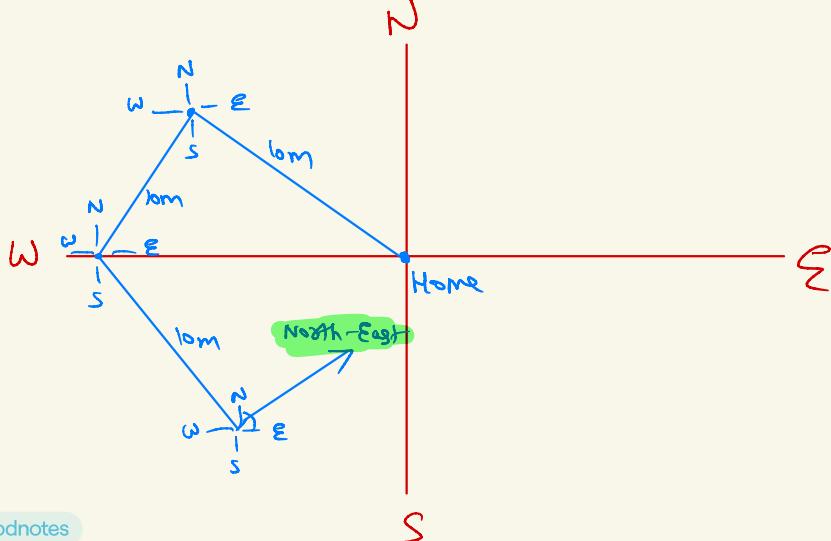


Based on NE / SE / NW / SW

- ① Pavan goes 7 km towards south-east from his house, then he goes 14 km turning to west. After this he goes 7 km towards north-west and in the end he goes 9 km towards East. How far is he from his house?

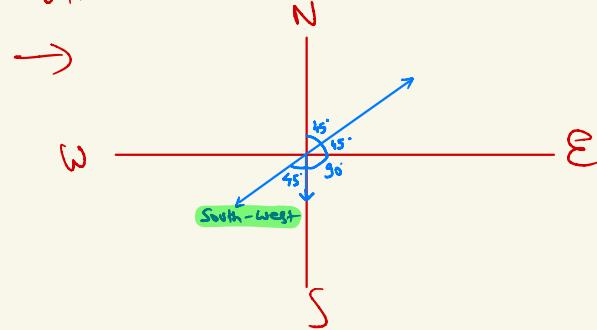


- ② A lady leaves from her home. She first walks 10m in North-west direction and then 10m in South-west direction. Next she walks 10m in South-East direction. Finally she turned towards her house. In which direction is she moving?

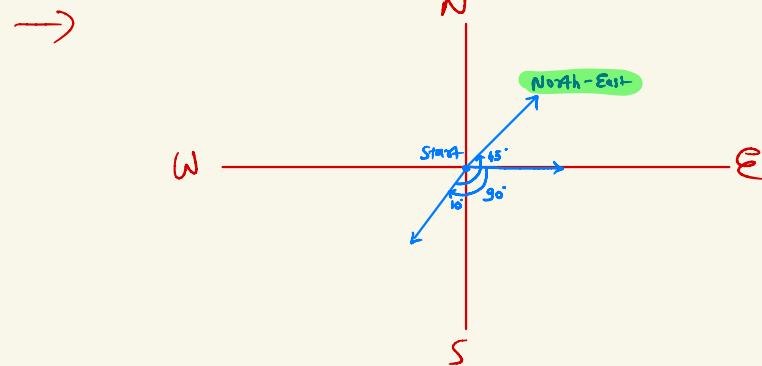


Based on Degree

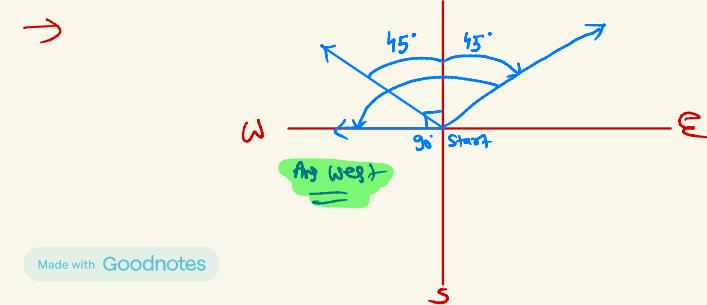
① A man is facing South. He turns 135 degree in anti-clockwise direction and then 180 degree in clockwise direction. Which direction is he facing now?



② I am facing East. I turn 100 degree in clockwise direction and then 145 degree in anticlockwise direction. Which direction am I facing now?



③ A man facing North-west. He turns 90 degree in clockwise direction and then 135 degree in anti-clockwise direction. Which direction is he facing now?

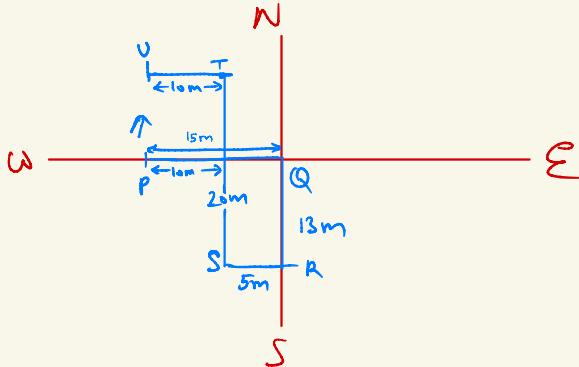


Miscellaneous

① P is 15m to the west of Q. R is 13m to the south of Q and 5m to the east of S. T is 20m to the north of S. T is 10m to the East of U.

* In which direction U with respect to P → North

* In which direction R with respect to P → South-East



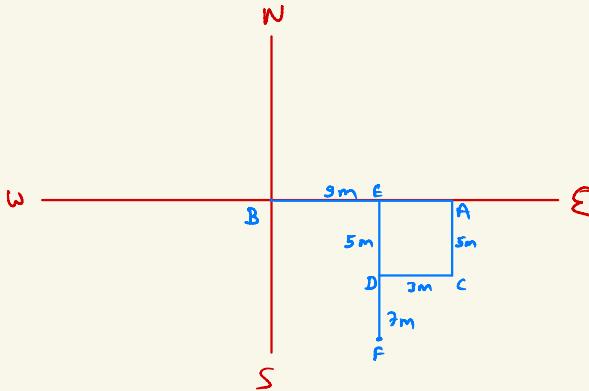
② Point A is 9m towards the east of point B. Point C is 5m towards the south of point A. Point D is 3m towards the west of point C. Point E is 5m towards the north of point D. Point F is 7m towards the south of point D.

* Which of following points are straight line

(A) FCD (B) AEB (C) EBD (D) ECA

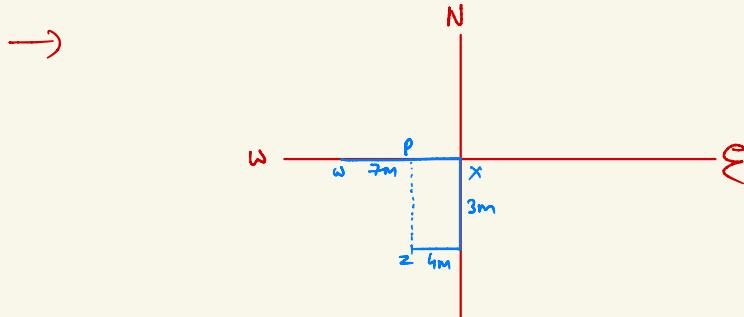
* What is B position with resp. to C? North-West

* How far E is from point B? 6m



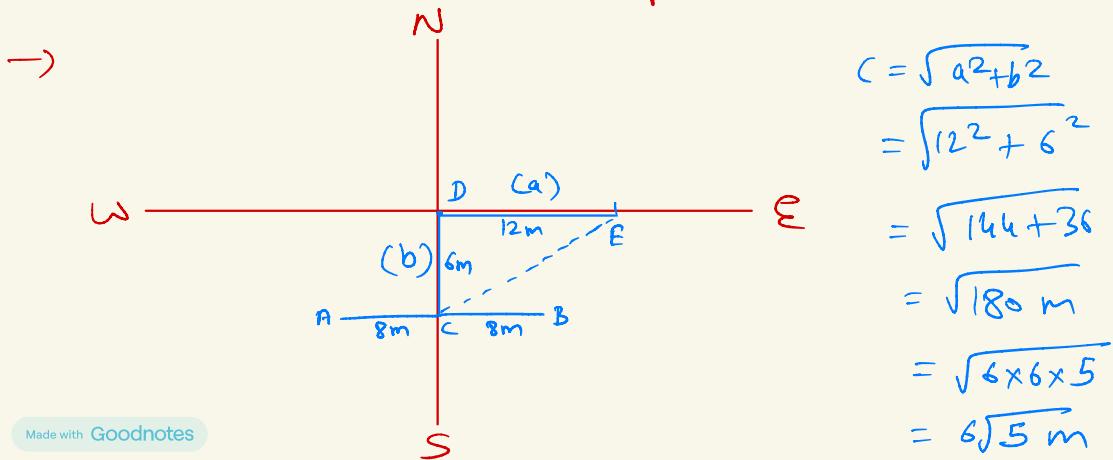
③ Point \textcircled{W} is 7m towards the west of point \textcircled{X} . Point \textcircled{X} is 3m towards the north of point \textcircled{Y} . Point \textcircled{Z} is 4m towards west of point \textcircled{Y}

- * A person walks 3m towards north of point Z and reaches point P . How far and in which direction will have to walk to reach \textcircled{W} ? 3m west
- * What is position of X with respect to P ? East



④ There are A, B, C, D and E ⁵s five table in a hall in following manner-
 C is Equidistant from A and B the distance betn C and D is 6m and C is south of D . E is to the East of D . A and B are placed West-East direction resp. Distance betn A and B is 16m and distance betn D and E is 12m.

- * What is the distance betn C and E $\rightarrow 6\sqrt{5} \text{ m}$
- * B is in which direction with resp. to D . \rightarrow South-East



$$\begin{aligned}
 C &= \sqrt{a^2 + b^2} \\
 &= \sqrt{12^2 + 6^2} \\
 &= \sqrt{144 + 36} \\
 &= \sqrt{180} \text{ m} \\
 &= \sqrt{6 \times 6 \times 5} \\
 &= 6\sqrt{5} \text{ m}
 \end{aligned}$$