One Mark Questions

1. Select the option that is related to the third number in the same way as the second number is related to the first number.

484 : 22 : 4096 : ?

a) 32 b) 64 c) 62 d) 34

$22^2 = 484$, $64^2 = 4096$

2. Select the option that is related to the third number in the same way as the second number is related to the first number.

8 : 576 : 13 : ?

a) 1396 b) 2346 c) 2366 d) 2126

$8 : (8^3 + 8^2) = 576$; $13 : (13^3 + 13^2) = 2366$

3. Select the option that is related to the fourth term in the same way as the first term is related to the second term.

14 : 144 : ? : 289

a) 17 b) 19 c) 21 d) 15

$(14 – 2)^2 = 144$, $(19 – 2)^2 = 289$

4. Select the option that is related to the fourth term in the same way as the first term is related to the second term.

25 : 576 :: ? : 169

a) 13 b) 15 c) 14 d) 16

$(25 – 1)^2 = 576$ $(14 – 1)^2 = 169$

5. Select the option that is related to the third number in the same way as the second number is related to the first number.

89 : 83:: ? : 67

a) 61 b) 71 c) 78 d) 79

Consecutive Prime Numbers

6. Select the option that is related to the third number in the same way as the second number is related to the first number.

13 : 2196 :: 9 : ?

a) 728 b) 729 c) 730 d) 727

$13^3 – 1 = 2196$, $9^3 – 1 = 728$

7. Select the number-pair in which the two numbers are related in the same way as are the two numbers of the given number pair.

125 : 343 :: 729 : ?

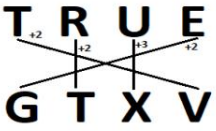
a) 121 b) 1331 c) 1221 d) 484

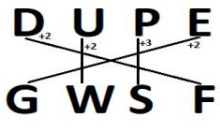
$5^3 : (5 + 2)^3$, $9^3 : (9 + 2)^3$

8. Select the option that is related to the third lettercluster in the same way as the second letter-cluster is related to the first letter-cluster.

TRUE : GTVX :: DUPE : ?

a) GSWF b) HWFS
c) GWSF d) FSWG

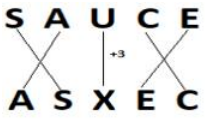


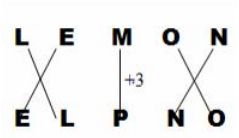


9. Select the option that is related to the third lettercluster in the same way as the second letter cluster is related to the first letter-cluster.

SAUCE : ASXEC : LEMON : ?

a) LEQNO b) ELPNO c) ELQON
d) ELRNO





10. Select the option that is related to the third term in the same way as the second term is related to the first term.

MAN : QER :: GUN : ?

a) KYC b) KYR c) YKR d) RYK

M + 4 = Q; A + 4 = E; N + 4 = R

Similarly, G + 4 = K; U + 4 = Y; N + 4 = R

11. Select the option that is related to the third lettercluster in the same way as the second letter cluster is related to the first letter-cluster.

FDKL : UWPO :: NAME : ?

a) MZNV b) MNZV
c) NMVZ d) MBNV

Letters are replaced by their reverse letters.

12. Select the option that is related to the third lettercluster in the same way as the second letter-cluster is related to the first letter-cluster.

ASKLJ : CVOQP : WOIDN : ?

a) YRMIT b) YMRIT
c) YRIMT d) YQMIT

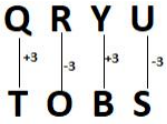
A + 2 = C; S + 3 = V; K + 4 = O; L + 5 = Q; J + 6 = P

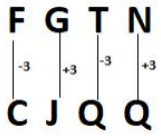
Similarly, W + 2 = Y; O + 3 = R; I + 4 = M; D + 5 = I; N + 6 = T

13. Select the option that is related to the Fourth lettercluster in the same way as the first letter-cluster is related to the second letter-cluster.

QRYU : TOBS :: ? : FGTN

a) IDWK b) CJQQ
c) CQJQ d) IWDK





14. Based on the analogy given, find the missing number from the given options.

2345 : 196 :: 6492 : ?

a) 169 b) 484 c) 441 d) 121

2345 : 196 → $(2 + 3 + 4 + 5)^2$ => 142 = 196

6493 → $(6 + 4 + 9 + 2)^2$ => 212 = 441

15. Select the option that is related to the third lettercluster in the same way as the second letter-cluster is related to the first letter-cluster

AGHD : DDLZ::RAJA:?

a) UNXW b) UXNW
c) UXNX d) UWNX

A + 3 = D; G – 3 = D; H + 4 = L; D – 4 = Z

Similarly,

R + 3 = U; A – 3 = X; J + 4 = N; A – 4 = W

Two Marks Questions

16. Choose the pair of words which expresses the same relationship as

$\frac{8}{10}$: 164 :: $\frac{7}{12}$:

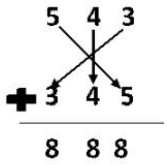
a) 189 b) 193 c) 304 d) 841

8/10 : 164 → 8/10 : (8^2 + 10^2) Similarly, 7/12 : 193 → 7/12 : (7^2 + 12^2)

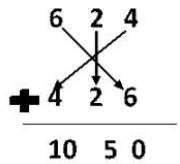
17. Choose the pair of words which expresses the same relationship as

543 : 888

a) 123 : 675b) 918 : 112 c) 785 : 237 d) 624 : 1050



Similarly,



18. Choose the pair of words which expresses the same relationship as

6 : 37 :: 3: _____

a) 153 b) 64 c) 34 d) 88

6 : 37 are co-prime numbers. Similarly, 3 : 34 are co-prime numbers.

19. Choose the pair of words which expresses the same relationship as

5648 : 46

a) 4329 : 32 b) 4189 : 34 c) 6732 : 87 d) 6765 : 48

(5 + 6 + 4 + 8) = 23 × 2 = 46 Similarly, (6 + 7 + 6 + 5) = 24 × 2 = 48

20. 625: 526 : : 225 : _____

a) 252 b) 256 c) 522 d)289

Reverse of the given number

21. Based on the analogy given, find the missing number from the given options.

HUMAN : 171 ∷ ACTOR : ?

a) 231 b) 187 c) 169 d) 171

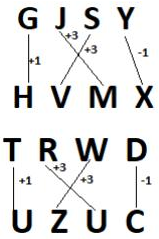
HUMAN = (8 + 21 + 13 + 1 + 14) = 57; 57 × 3 = 171

ACTOR = (1 + 3 + 20 + 15 + 18) = 57; 57 × 3 = 171

22. Select the option in which the words share the same relationship as that shared by the given pair of words.

GJSY : HVMX : TRWD : ?

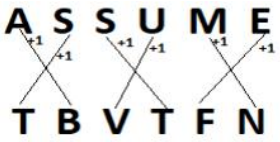
a) UZUC b) UUZC c) ZUUC d) CZUX

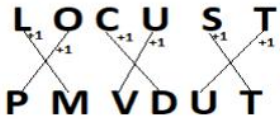


23. Select the option that is related to the third word in the same way as the second word is related to the first word.

ASSUME : TBVTFN :: LOCUST : ?

a) PMVUDT b) PVMDUT c) PMVDUT
d) PMDVUT





24. Select the option that is related to the Fourth letter cluster in the same way as the first letter-cluster is related to the second letter-cluster.

DOCTOR : ALZQLO :: ? : KROPB

a) STAFF b) PANEL
c) PATEN d) NURSE

25. Based on the analogy given, find the missing Number from the given options.

234 : 70 ∷546 : ?

a) 328 b) 543 c) 788 d) 648

234 : 70 → $(2^3 + 3^3 + 4^3) – (2^2 + 3^2 + 4^2) = 99 – 29 = 70$

Similarly,

546 : ? → $(5^3 + 4^3 + 6^3) – (5^2 + 4^2 + 6^2) = 405 – 77 = 328$

26. Select the option that is related to the third number in the same way as the second number is related to the first number.

25 : 105 :: 55 : ?

a) 255 b) 505 c) 231 d) 285

25 : (25 × 4) + (25 ÷ 5)

(55 × 4) + (55 ÷ 5) = 220 + 11 = 231

27. Select the option that is related to the third number in the same way as the second number is related to the first number.

4 : 80 :: 9 : ?

a) 190 b) 270 c) 145 d) 810

4 × [4 × (4 + 1)] = 80 9 × [9 × (9 + 1)] = 810

28. Select the option that is related to the third number in the same way as the second number is related to the first number.

9 : 504 : 11 : ?

a) 1281 b) 999 c) 990 d) 1099

[9 × (9 – 1) × (9 – 2)] = 504 [11 × (11 – 1) × (11 – 2)] = 990

29. Select the option that is related to the third number in the same way as the second number is related to the first number.

112 : 126 :: 120 : ?

a) 136 b) 150 c) 135
d) 122

14 × 8 = 112; 14 × 9 = 126 15 × 8 = 120; 15 × 9 = 135

30. 97 : 8 :: 43 : _____

a) 4 b) 2
c) 3 d) 7

Subtracting previous prime number

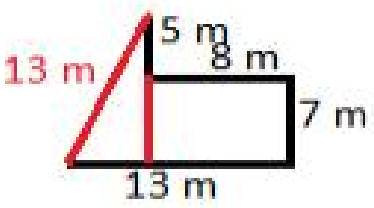
97-89=8 and 43-41=2

DIRECTION SENSE

One Mark Questions

1. Ravi started from his house and walked 13m east, then he takes a left and walked 7m. Then again he takes a left and walks 8m. He finally takes right and walked 5m. What is the shortest distance between his house and final point?

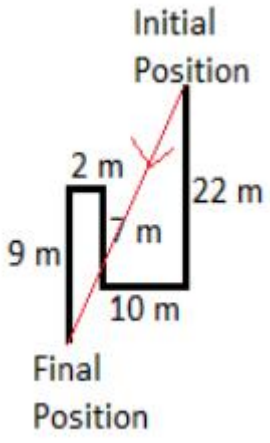
a) 15m b) 12m c) 13m
d) 11m



Shortest distance between his house and final point =$\sqrt{5^2 + 12^2}$ = $\sqrt{25 + 144}$ = $\sqrt{169}$ =13

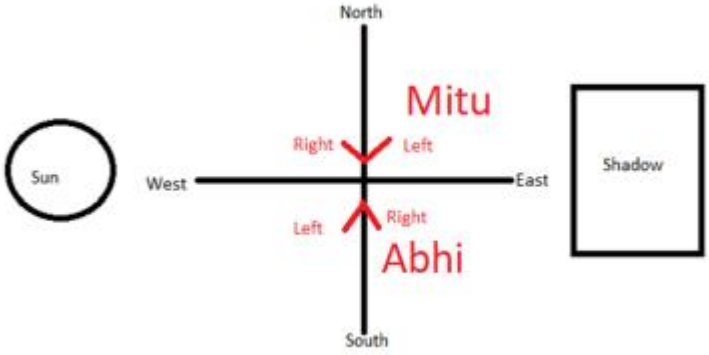
2. Tanisha starts from his office walks 22km towards south and walks 10m after taking right and he again take a right and walks 7m and then finally taken a left turn and walks 2km. If he moves 9m towards south, what is the direction of final point with respect to starting point.

a) North-East b) South-West c) North-West d) South-East



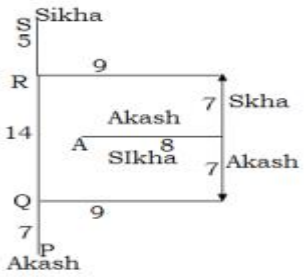
3. In the evening after sunset, Mitu and Abhi were talking to each other standing in front of each other. If the shadow of Mitu falls to the right of Abhi, then in which direction is Abhi's face?

a) East b) West c) North d) South



4. Akash and Sikha start cycle race from point A. They both start towards east direction. After cycling for 8m, akash takes right turn while sikha takes a left turn. They both cycle for 7m. sikha takes left and cycles for 9m and takes a right turn. Now she cycles for 5 m. Akash takes right and cycles for 9m and takes a left turn. Now he cycles for 7m. Both stop at these points. How much distance towards north needs to travel Akash to meet Sikha's final position?

(a) 15 m (b) 17 m (c) 20 m (d) 26 m



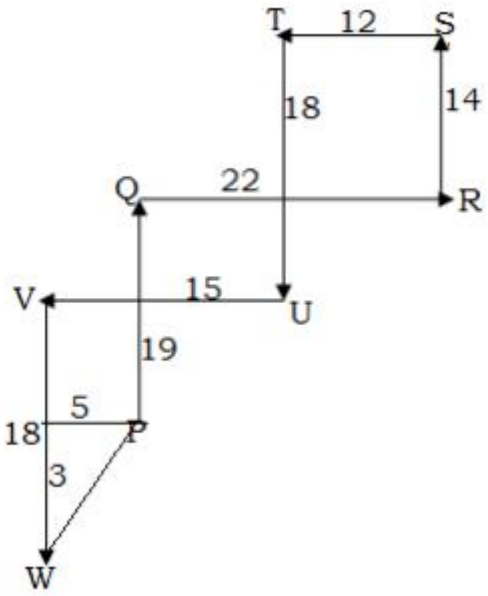
Total distance between sikha and akash is 26m

(PQ+QR+RS = 7 + 14 +5)

6. A person starts walking from P towards north direction to reach Q, which is 19m north to P. He then takes a right turn and walks 22 m to

reach point R. From R, he takes left turn and walks 14m to point S, then again, he takes a left turn and walks 12m to point T. From T, he takes a left turn and walks 18m to reach point U. He then takes a right turn and walks 15m to reach V and finally takes a left turn to reach point W, which is 18 m away from V. In which direction is point Q with respect to point U?

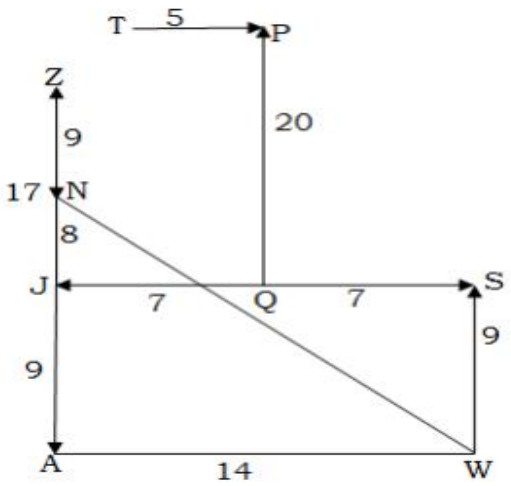
(a) North-west (b) South-east (c) North-east (d) South-west



7. Point P is 20m north of point Q. Point S is 7m east of point Q. Point Z is 17m north of point J. Point J is 7m west of point Q. Point N is 9m south of point Z. Point S is 9m north of point W. Point P is 5m east of point T. Point A is towards south of J and west of W respectively. What is the shortest distance between N and W?

a) $\sqrt{485}$ b) $\sqrt{486}$

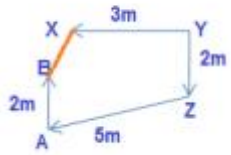
c) $\sqrt{487}$ d) 22



NW= $\sqrt{NA^2 + AW^2} = \sqrt{17^2 + 14^2} = \sqrt{485}$

8. X is 3m to the West of Y, who is facing north direction. Z is 2m South of Y. A is 5m South-West of Z. B is 2m to the North of A. What is the direction of B with respect to X?

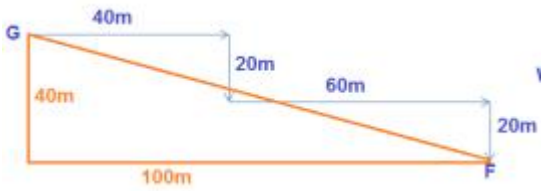
A) South-West B) North-East C) South-East D) North-West



Hence B is south-west direction with respect to X

9. The house of G is facing west direction. From the opposite side of his house G walks straight 40m. Again he walks 20m after turning to his right and then he turns to his left and walked 60m. Finally, he turns towards south and walks 20m to F's house and stops. What is the distance between G's house and F's house?

A) $20\sqrt{29}$ B) $10\sqrt{29}$ C) $15\sqrt{29}$ D) $19\sqrt{29}$

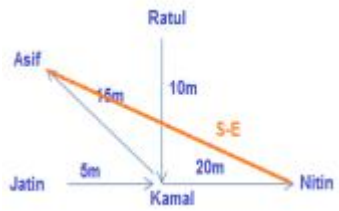


Distance between G and F is

$\sqrt{40^2 + 100^2} = \sqrt{1600 + 10000} = \sqrt{11600} = 20\sqrt{29}$

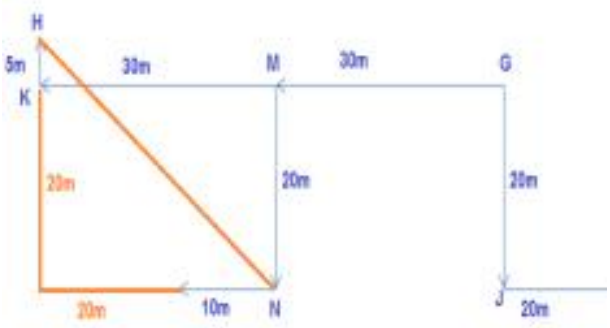
10. Kamal is 10m to the south of Ratul. Nitin is 20m to the East of Kamal. Asif is 15m to the North-West of Kamal, who is 5m to the East of Jatin. Nitin is in which direction with respect to Asif?

A) South-East B) South C) North-West D) North



11. 8 persons G, H, I, J, K, L, M and N are standing in such a way that I is 10 m in west from N, N is 20 m South with respect to M. M is 30 m towards West with respect to G. J is 20 m towards South with respect to G . H is 5 m apart from K towards North. L is 20 m towards East with respect to J. K is 30 m towards West with respect to M. What is the shortest distance between N and H?

A) 41 B) $6\sqrt{21}$ C) 35 D) $5\sqrt{61}$

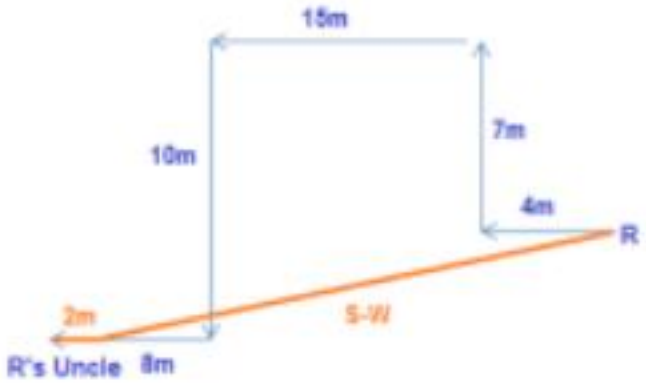


Distance between HN

= $\sqrt{25^2 + 30^2} = \sqrt{625 + 900} = \sqrt{1525} = 5\sqrt{61}$

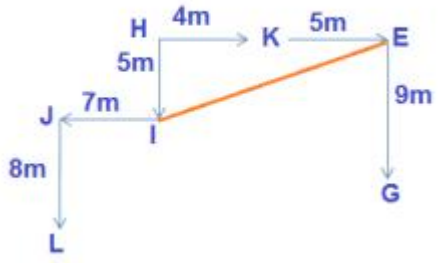
12. R started walking from his house to his uncle's house. At first he walked 4m to the West then turned right. After walking 7m he turned left and covering 15m distance. Then he walked 10m to the South direction. Finally he turned 8m right and reached his destination. From his uncle's house R takes a U turn and walks 2m distance, now in which direction is R from his starting position?

A) South-West B) North-East C) South-East D) North-West



13. If G is 9m to the south of E. E is 5m to the east of K. K is 4m to the east of H. I is 5m south of H. J is 7m west of I. L is 8m south of J. What is the distance between I and E?

A) $2\sqrt{34}$m B) $\sqrt{106}$ C) $\sqrt{207}$ D) 65

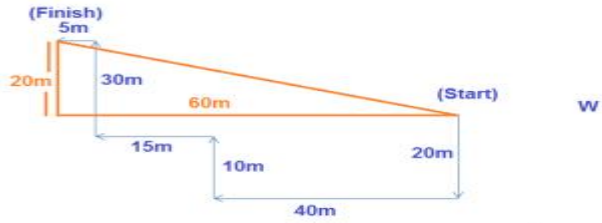


Distance between IE =

$$\sqrt{9^2 + 5^2} = \sqrt{81 + 25} = \sqrt{106}$$

14. Ramu walks 20m to towards the south direction. From there she turns right and walks 40m. Then she turns to her right and walks 10m, again she walks to the west direction. After walking 15m she turns to her right and walks 30m. Again she walks 5m to her left and stops. So in which direction and what is distance between Ramu's final position and initial position?

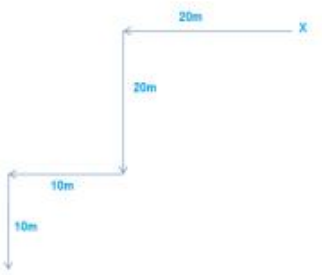
A) $15\sqrt{10}$ B) $20\sqrt{15}$ C) 30 $\sqrt{5}$ D) $20\sqrt{10}$



Hence, the distance is $\sqrt{(20^2 + 60^2)} = \sqrt{(400}$ $\sqrt{4000} = 20\sqrt{10}$m

15. Pallavi started moving from point X and moves towards west direction. After cycling for a distance of 20m, she took a left turn, and moves 20m then she took a right turn, and moves 10m after that she took a left turn and moved 10m more. In which direction is Pallavi facing now?

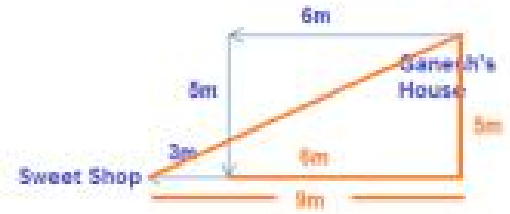
A) North B) South C) East D) West



Two Marks Questions:

16. Ganesh's house is facing north direction, from his house he goes to the sweet shop. So he walks 6m to the left and then again turns left. After covering 5m distance he turns right. After walking 3m he reached the sweet shop. Now in what distance is sweet shop from his house?

A) 16m B) 151m C) $\sqrt{105}$ m D) $\sqrt{106}$ m



Distance between House and Shop is

$$\sqrt{9^2 + 5^2} = \sqrt{81 + 25} = \sqrt{106}$$

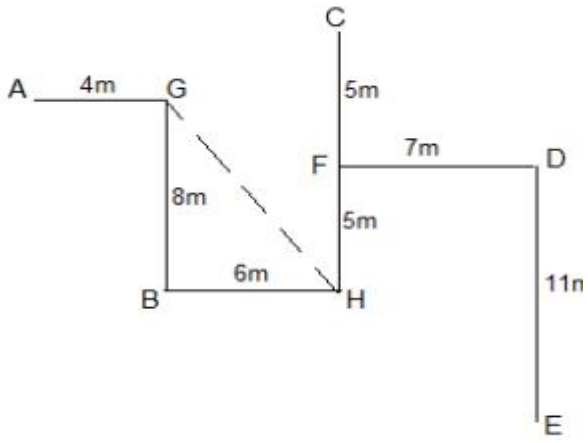
17. Point A is 4m west of point G, which is 8m north of point B. Point E is 11m south of point D, which is 7m east of point F. Point H is 10 south of point C, which is 5m north of point F. Point B is 6m west of point H. Which among the following statements is/are true?

a. Shortest distance between point G and point H is equal to the distance between point H and point C.

b. Shortest distance between point B and point D is less than the distance between point D and point E.

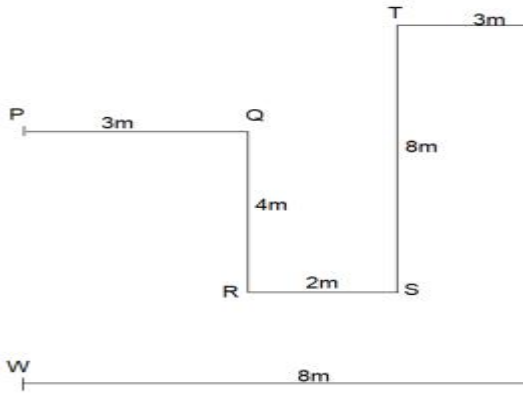
c. Point A is north east of point H.

d. Both (a) and (c)



18. A person starts walking from point P in east direction. After walking 3m he turns right from point Q and walks for 4m he turns left from point R. He then walks for 2m and then turns left from point S. He walks for 8m and turns right from point T. He walks for 3m and turns right from point U and walks for 10m. He then turns right from point V and walks for 8m till point W. What is the shortest distance between P and R?

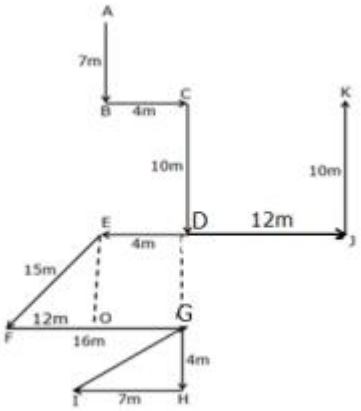
a. 3m b. 6m c. 5m
d. 4m



Distance between PR is $\sqrt{3^2 + 4^2} = 5$

19. A is 7 m north of B. D is 10m south of C which is 4m east of B. G is 16m east of F and 4m north of H Which is to the south of D. I is 7m west of H and to the South-west of G which is to the South-West of J. K is 10m north of J. F is 15m south-west of E which is 4m west of D. J is 12m east of D. What is the direction of F with respect to J?

A) South-East B) North-East C) South-West D) North-West



DIRECTIONS (20-21) :

There are three friends P, Q and R. They make a plan for a movie and start their journey to the theatre from their home which is in different directions. P starts travelling to go to the theatre in east direction. After travelling 4km he turns right and travels for 5km. Then he turns left and after travelling 4km he turns right and travels 2km to reach the theatre. Q starts travelling in south direction and after covering 10km he turns right and covers 6km. Then he again turns right and travels for 3km after which he takes a left turn and covers 5km to reach the theatre. R starts travelling in west direction and travels for 7km. Then he turns right and travels for 5km then again turns right and covers 7km. Then he takes a left turn and travels for 3km and finally he turns right and covers 4km to reach the theatre.

20. What is the distance between P and the one who lives in North-East direction to the theatre and find the direction of P with respect to the Theatre?

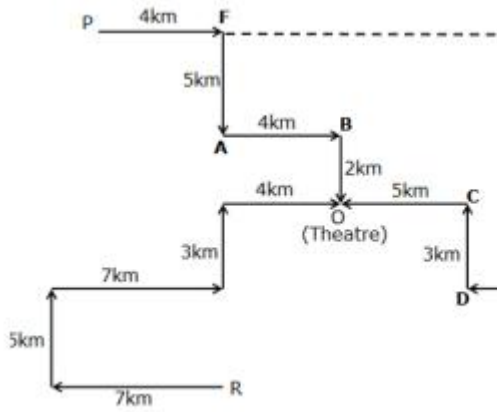
A) South-West, 13km B) North-East, 15km

C) South-East, 17km D) North-West, 19km

21. What is the distance between R and F?

A) 13km B) 15km

C) 17km D) 19km



Solution for 20:

PQ= AB + PF + OC + DE

PQ= 4km + 4 km + 5km + 6 km

PQ = 19 km

Direction of P w.r.to theatre is north-west

Directions for questions 22:

G # H means G is to the right of H at a distance of 3m.

G $ H means G is to the left of H at a distance of 3m.

G & H means G is to the north of H at a distance of 3m.

G * H means G is to the south of H at a distance of 3m.

22. P # Q * R # S, then S is in which direction with respect to P?

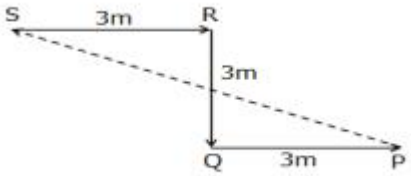
A) South-East B) North-West C) North-East D) South-West

First we will decode the codes:

P # Q: P is to the right of Q at a distance of 3m.

Q * R: Q is to the south of R at a distance of 3m.

R # S: R is to the right of S at a distance of 3m.



S is in North-West of P

Directions (23-24) Study the given information and answer the following question

a) A! B means A is 3m west of B.

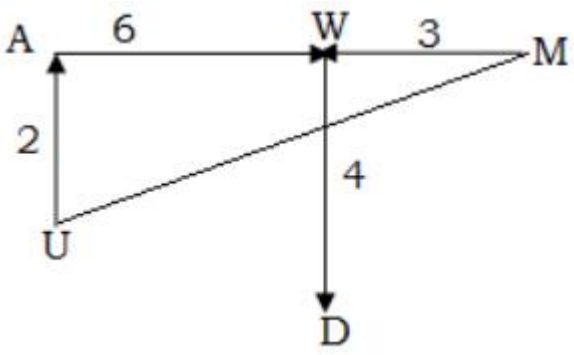
b) A@ B means A is 6m east of B.

c) A # B means A is 2m north of B.

d) A $ B means A is 4m south of B.

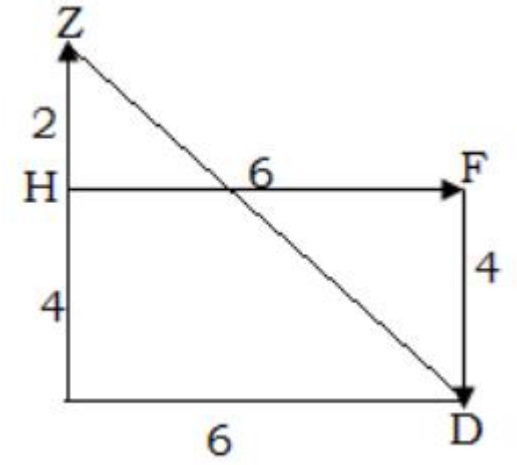
23. If the expression 'D $ W @ A # U, W! M' is true, what is the direction of M with respect to U?

(a) South West (b) North East (c) South (d) North



24. If the expression 'F @ H, D $ F, Z # H' is true, what is the shortest distance between Z and D?

(a) $\sqrt{41}$ (b) $\sqrt{35}$ (c) $\sqrt{24}$ (d) $\sqrt{72}$



Distance between DZ = $\sqrt{6^2 + 6^2} = \sqrt{72}$

Directions (25-26) Study the given information and answer the following question

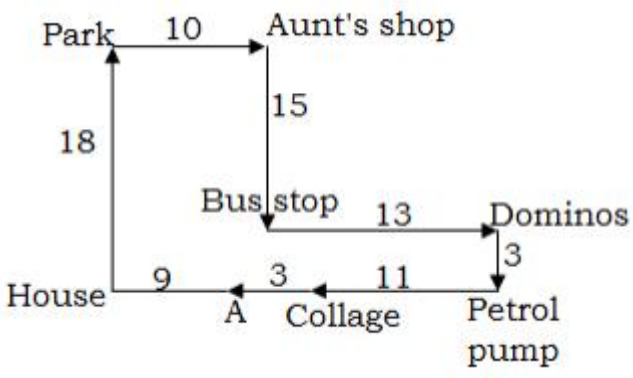
Preeti starts walking towards her College from her house. The total distance between Preeti's house and her College is 70m. She walks 18m from her house towards North direction to reach a park and then she takes a right turn and walks for 10m to reach her Aunt's shop. From her Aunt shop she takes a right turn and walks for 15m to reach bus stop. From bus stop, she walks 13m towards east to reach dominos, from Dominos she takes a right turn and walks 3m to reach petrol pump. From petrol pump, she walks 11m in west direction and reached her College.

25. What is the shortest distance between College and her house?

(a) 13m (b) 9m (c) 12m
(d) 15m

26. If point A is 3m west of her College then in which direction is point A with respect to her Aunt shop?

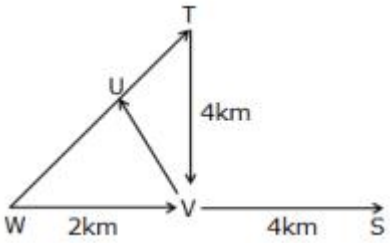
(a) South (b) North
(c) South-east (d) South-west



Directions (27-28): Study the following information and answer the questions below: There are 5 friends S, T, U, V and W standing randomly. T is to the northeast of W. V is 2km to the east of W, who is 6km to the west of S. U is to the northwest of V and in the line of WT. V is 4km the south of T.

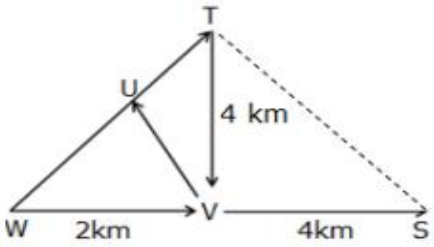
27. In which direction is U with respect to S?

A) South-West B) South-East C) North-East D) North-West



28. What is the shortest distance between T and S?

A) $4\sqrt{3}\,km$ B) $4\sqrt{2}\,km$ C) $4\sqrt{4}\,km$
D) $4\sqrt{5}\,km$



$(TS)^2 = (TV)^2 + (VS)^2$

$(TS)^2 = (4)^2 + (4)^2$

$(TS)^2 = 16 + 16$

$(TS)^2 = 32$

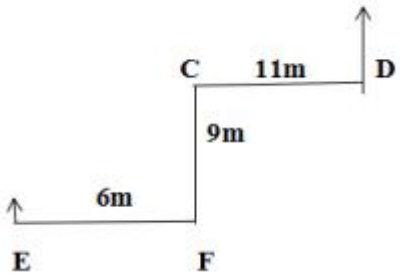
$TS = 4\sqrt{2}$ km

Direction (29-30): Read the following information carefully and answer the questions that follow:

E% F means E is to the right of F at a distance of 6m. E @ F means E is to the left of F at a distance of 7m. E $ F means E is to the north of F at a distance of 8m. E # F means E is to the south of F at a distance of 9m. E * F means E is to the east of F at a distance of 10m. E ! F means E is to the west of F at a distance of 11m. All people are facing North direction.

29). E % F # C ! D, then D is in which direction with respect to E?

a) North b) North-East
c) North-West d) South-West



30). A # B % C # D, then D is in which direction with respect to A?

a) North b) North-East
c) South d) North-West