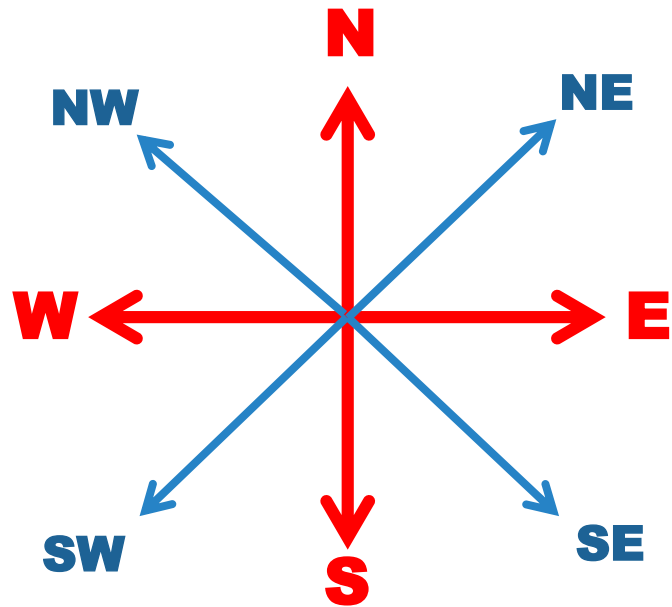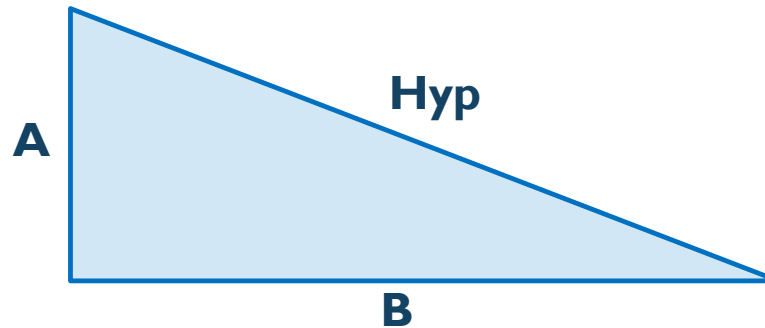# DIRECTIONS

- KOUSTAV

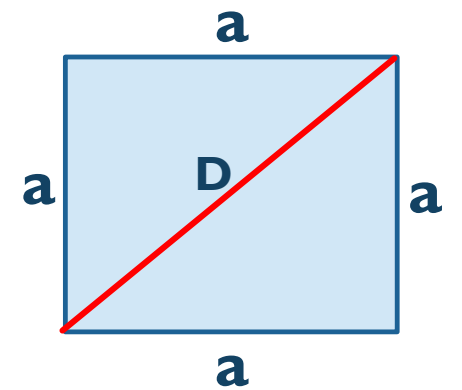# CONCEPT

Pythagoras' Theorem

$$Hyp = \sqrt{A^2 + B^2}$$

$$D = \sqrt{a^2 + a^2}$$
$$= \sqrt{2a^2}$$

$$D = a\sqrt{2}$$

1. Ross started walking from his home in search of Rachel. He went 90m in the East, then he turned right and went 20m. After this he turned right and after going 30m he found a forest. He searched in the forest, but didn't find her. From there he went 100m to his north and reached the bank of a river. In which direction from his home is he now?

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

2. A boy runs 5km towards East and then turns left and walks 6km. Again he turns right and walks 9km. Finally he turns to his right and walks 6km. How far is he from the starting point and in which direction?

A. 9km, West   B. 14km, East   C. 9km, East   D. 14km, West

3. Early morning, Vegeta started jogging, facing opposite the Sun, jogged for 6km, then he turned right and jogged for 5km, then again he turned right and jogged for 2km and finally he jogged for 5km by turning right and reached the swimming pool. In which direction from his home is the swimming pool?

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

4. Snape starts walking from his home at 9 a.m. He walked 4km towards West, then he turned right and walked for 6km and then 4km towards right, and finally he walked for 8km to his right and reached the school in the town. How far and in which direction is he from his home now?

A. 2km South   B. 12km East   C. 12km South   D. 2km North

5. Tom started chasing Jerry from the dining table, ran behind him for 16√2m towards South-West, from there 2m towards the East, then 9m towards North, and then 2m towards East and finally he ran for 7m till the door in the North and caught Jerry. In which direction is the dining table with respect to the door?

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

6. Dev, Kumar, Nilesh, Ankur & Pintu are standing facing to the North in a playground such as given below:

Kumar is at 40m to the right of Ankur.

Dev is at 60m in the south of Kumar.

Nilesh is at a distance of 25m in the west of Ankur.

Pintu is at a distance of 90m in the North of Dev.

i) Which one is in the North-East of the person who is to the left of Kumar?

    A. Dev   B. Nilesh   C. Ankur   D. Pintu

ii) If a boy starting from Nilesh, met Ankur and then Kumar and then Dev and then Pintu and whole the time he walked in a straight line, then how much total distance did he cover?

    A. 215m   B. 155m   C. 245m   D. 185m

7. Harry went in search of Frodo from his home. He walked for 300m towards East, then walked for 400m to his left, from there 700m towards his right and reached the school. There he didn't find Frodo. From school he started walking towards South, walked for 900m, then took a right turn and walked for 300m, and then he took a left turn and walked for 200m. Finally, Harry found Frodo in a playground there.

i) In which direction is their home with respect to the playground?
A. West
B. North-West
C. North-East
D. None of these

ii) In which direction is the school with respect to the home?
A. South-East
B. South-West
C. North-East
D. North-West

iii) How far is the playground from their home?
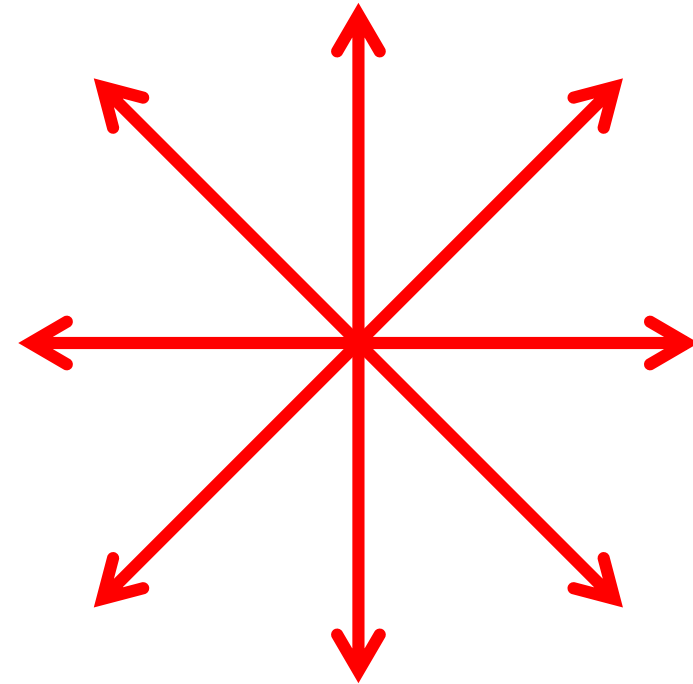A. 700 m
B. 700√2 m
C. 500√2 m
D. 900 m

8. Hermione has kept her wrist-watch on her table in such a way that the hour hand points towards North-East and the minute hand towards South-West at 6 p.m.

i)   Towards which direction is the hour hand pointing at 3:00 a.m.?

A. North-East

B. North-West

C. South-East

D. South-West

ii)   Towards which directions are the hour hand and minute hand respectively pointing at 4:30 in the evening?

A. North, North-West

B. South, South-East

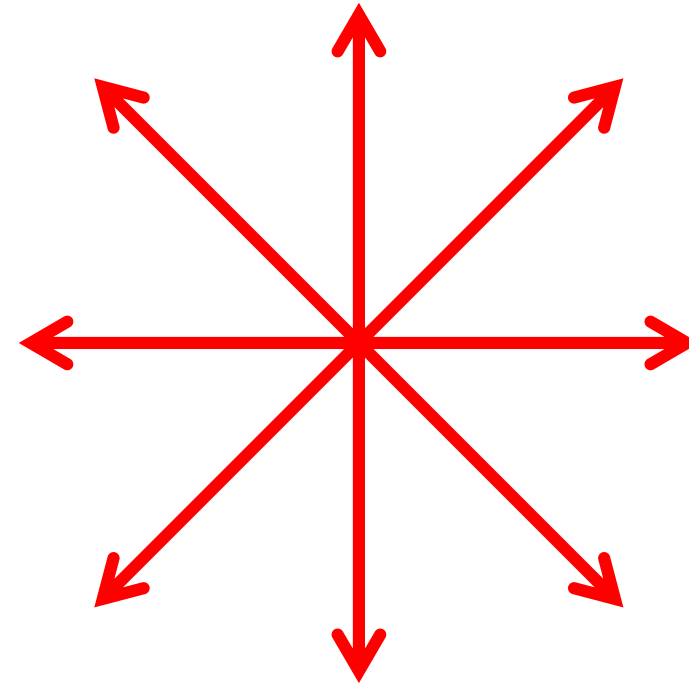C. North, North-East

D. South-East, South

9. The time piece in Dumbledore's home is kept in such a way that the hour hand points towards North at 9:00 in the morning.

i)   In which direction will the minute hand point at 6:15 in the next morning if the position of the clock is unchanged?
A. North   C. East
B. West   D. South

ii)   In which directions will the minute hand and hour hand respectively point at 10:30 a.m.?
A. West, North-West
B. West, North-East
C. North-East, West
D. North-West, East

10. If South-West becomes South-East, West becomes South and so on then

i) _____ becomes East.
    A. West   B. North   C. South   D. North-West

ii) North-East becomes _____.
    A. South-West   B. North   C. East   D. North-West