

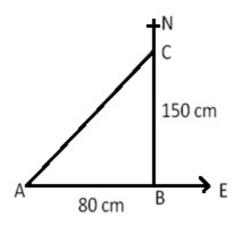
Exercise 4D

#### Question 2:

Starting from A, let the man goes from A to B and from B to C, as shown in the figure.

Then,

AB = 80 m, BC = 150 m and 
$$\angle$$
ABC = 90<sup>0</sup>  
From right  $\triangle$ ABC, we have



## By Pythagoras theorem, we have

$$AC^{2} = (AB^{2} + BC^{2})m^{2}$$
$$= [(80)^{2} + (150)^{2}]m^{2}$$
$$= (6400 + 22500)m^{2}$$
$$= 28900 m^{2}$$

: 
$$AC = \sqrt{28900} \text{ m} = 170 \text{ m}$$

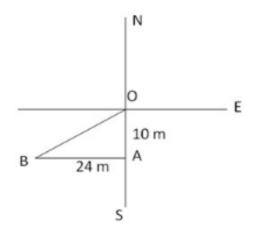
Hence, the man is 170m north-east from the starting point.

### Question 3:

Starting from O, let the man goes from O to A and then A to B as shown in the figure.

### Then,

OA = 10 m, AB = 24 m and  $\angle OAB = 90^{\circ}$ 



# Using Pythagoras theorem:

$$OB^2 = OA^2 + AB^2$$

$$\Rightarrow OB^2 = 10^2 + 24^2$$

$$\Rightarrow$$
 OB<sup>2</sup> = 100 + 576

$$\Rightarrow$$
 OB<sup>2</sup> = 676

Hence, the man is 26 m south-west from the starting position.

\*\*\*\*\*\*\* END \*\*\*\*\*\*