EXERCISE 4.4

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1. Construct the following quadrilaterals,

(i) Quadrilateral DEAR DE = 4 cm

EA = 5 cm AR

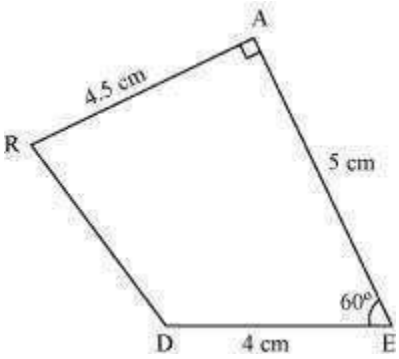
= 4.5 cm

∠E = 60°

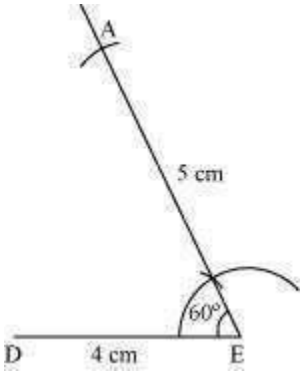
∠A = 90°

Solution:

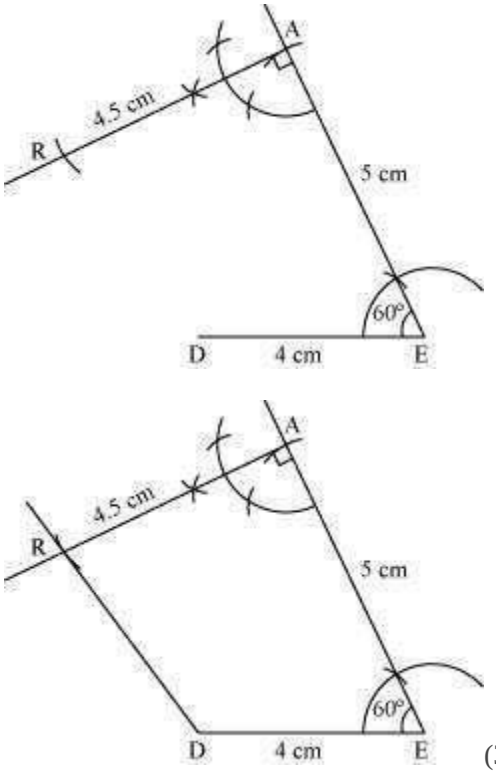
Rough Figure:



(1) Draw a line segment DE of 4 cm and an angle of 60º at point E. As vertex A is 5 cm away from vertex E, cut a line segment EA of 5 cm from this ray.



(2) Again, draw an angle of 90º at point A. As vertex R is 4.5 cm away from vertex A, cut a line segment RA of 4.5 cm from this ray.



(3) Join D to R.

DEAR is the required quadrilateral.

(ii) Quadrilateral TRUE TR = 3.5 cm

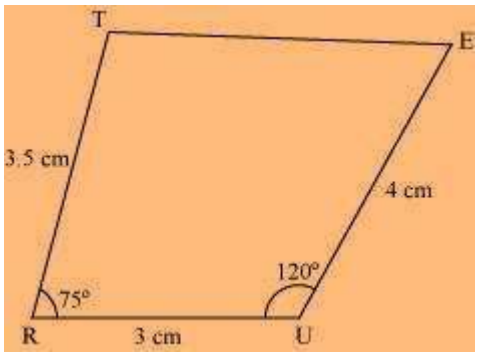
RU = 3 cm UE = 4 cm

∠R = 75°

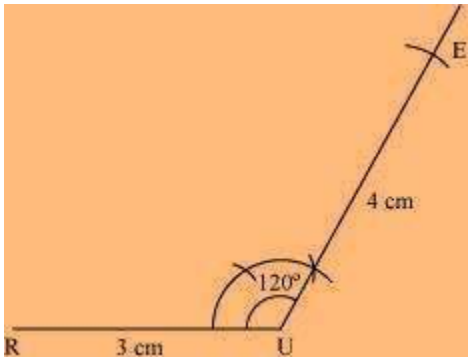
∠U = 120°

Solution:

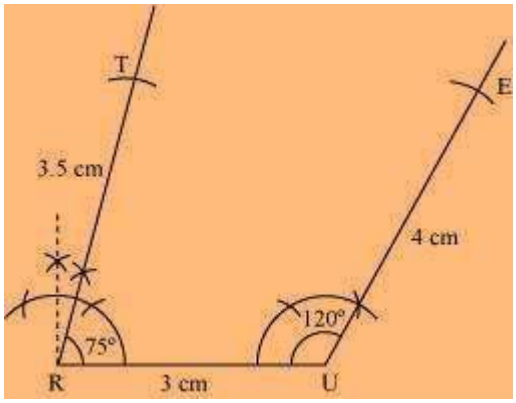
Rough Figure:



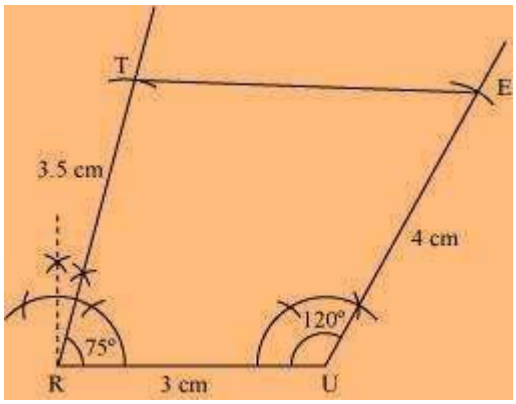
(1) Draw a line segment RU of 3 cm and an angle of 120º at point U. As vertex E is 4 cm away from vertex U, cut a line segment UE of 4 cm from this ray.



(2) Next, draw an angle of 75º at point R. As vertex T is 3.5 cm away from vertex R, cut a line segment RT of 3.5 cm from this ray.



(3) Join T to E.



TRUE is the required quadrilateral.