Justification of Construction:

We can justify the construction by showing ABC as an equilateral triangle i.e., AB = BC $= AC = 5 \text{ cm and } 4 = B4 = C = 460^{\circ}$ .

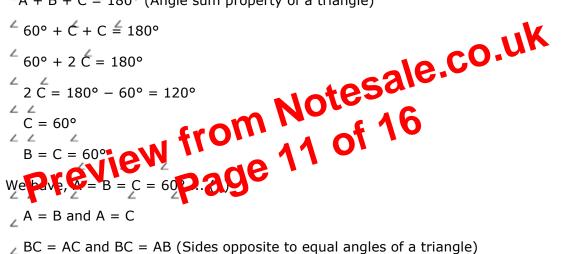
In  $\triangle ABC$ , we have AC = AB = 5 cm and  $\angle A = 60^{\circ}$ .

Since AC = AB,

 $\angle B = \bigcirc$  (Angles opposite to equal sides of a triangle)

In ΔABC,

 $^{\angle}A + B^{\leftarrow} + C \stackrel{\checkmark}{=} 180^{\circ}$  (Angle sum property of a triangle)



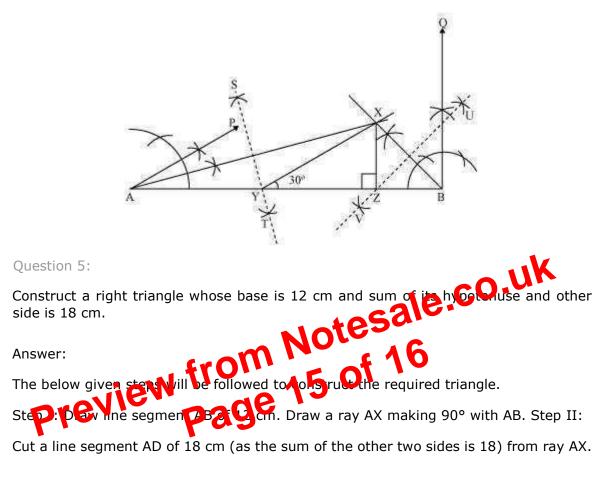
 $\angle$  BC = AC and BC = AB (Sides opposite to equal angles of a triangle)

 $AB = BC = AC = 5 \text{ cm} \dots (2)$ 

From equations (1) and (2),  $\triangle ABC$  is an equilateral triangle.

Exercise 11.2

Question 1:



Step III: Join DB and make an angle DBY equal to ADB.

Step IV: Let BY intersect AX at C. Join AC, BC.

 $\Delta ABC$  is the required triangle.