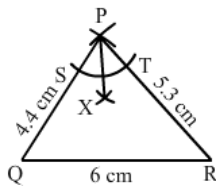# Constructions
Exercise 17B

Q2

Answer :

Steps of construction:
1. Draw a line segment QR of length 6 cm.
2. Draw arcs of 4.4 cm and 5.3 cm from Q and R, respectively. They intersect at P.
3. Draw an arc of any radius from the centre (P), cutting PQ and PR at S and T, respectively.
4. With S as the centre and the radius more than half of ST, draw an arc .
   5. With T as the centre and the **same radius, draw another arc cutting the previously**
                        drawn arc at X.
6. Join P and X.
Then, PX is the bisector of ∠P.

Q4

Answer :

Steps of construction:
1. Draw BC=5.3 cm
2. Draw an arc of radius 4.8 cm from the centre, B.
3. Draw another arc of radius 4.8 cm from the centre, C.
4. Both of these arcs intersect at A.
5. Join AB and AC.
6. With A as the centre and any radius, draw an arc cutting BC at M and N.

7. With M as the centre and the radius more than half of MN, draw an arc.
8. With N as the centre and the same radius, draw another arc cutting the previously drawn
9. Join AP, cutting BC at D.
Then, AD ⊥ BC
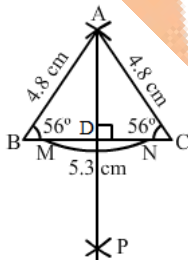
Q5

Answer :
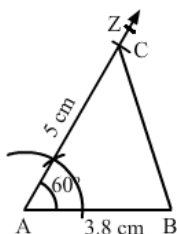
Steps of construction:
1. Draw AB of length 3.8 cm.
2. Draw ∠BAZ=60°
3. With the centre as A, cut ray AZ at 5 cm at C.
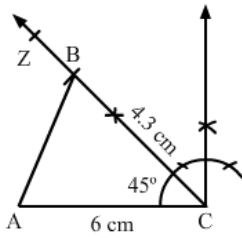4 Join BC.
Then, ABC is the required triangle.

Q6

Answer :

Steps of construction:
1. Draw AC= 6 cm
2. Draw ∠ACZ = 45°
3. With C as the centre, cut ray BZ at 4.3 cm at point B.
4. Join AB.
Then, ABC is the required triangle.

Q7

Answer :

Steps of construction:
1. Draw AB=5.2 cm
2. Draw ∠BAX=120°
3. With A as the centre, cut the ray AX at 5.3 cm at point C.
4. Join BC.
5. With A as the centre and any radius, draw an arc cutting BC at M and N.
6. With M as the centre and the radius more than half of MN, draw an arc.
7. With N as the centre and the same radius as before, draw another arc cutting the previously drawn arc at P.

8. Join AP meeting BC at D.
∴ AD ⊥ BC
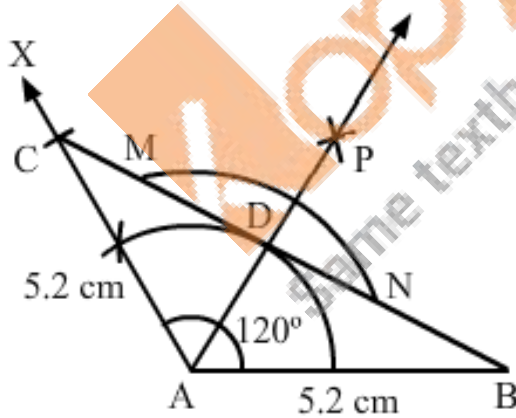
Q8

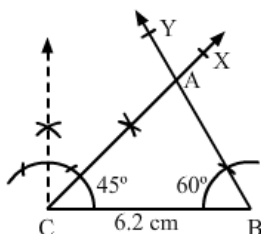**Answer :**

Steps of construction:
1. Draw BC=6.2 cm
2. Draw ∠BCX=45°
3. Draw ∠CBY=60°
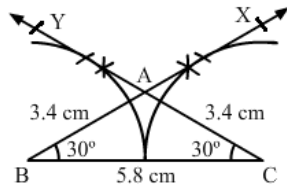4. The ray CX and BY intersect at A.
Then, ABC is the required triangle.

Q9

Answer :

Steps of construction:
1. Draw BC=5.8 cm
2. Draw ∠BCY = 30°
3. Draw ∠CBX = 30°
4. The ray BX and CY intersect at A.
Then, ABC is the required triangle.
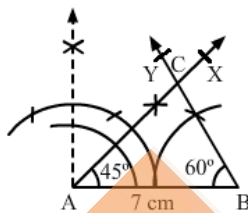On measuring AB and AC :
AB = AC = 3.4 cm

Q10

Answer :

By angle sum property :
∠B = 180° − ∠A − ∠C
= 180° − 45° − 75°
= 60°

Steps of construction:
1. Draw AB=7cm
2 Draw ∠BAX= 45°
3. Draw ∠ABY= 60°
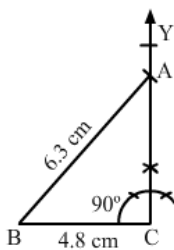4.The ray AX and BY intersect at C.
Then, ABC is the required triangle.

Q11

Answer :

Steps of construction:
1.Draw BC=4.8 cm
2.Draw a perpendicular on C such that ∠C is equal to 90°.
3.Draw an arc of radius 6.3 cm from the centre B.
4. Join AB.

Q12

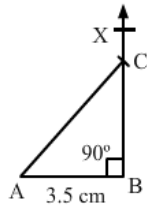**Answer :**

Steps of construction:

1. Draw AB=3.5 cm
2. Construct ∠ABX = 90°
3. With centre A, draw an arc of radius 6 cm cutting BX at C.
4. Join AC.
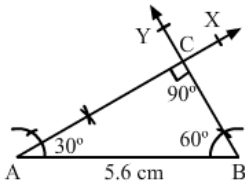
Then, ABC is the required triangle.

Q13

Answer :

Here, ∠A=30° and ∠C=90°

By angle sum property:

∠B=60°

1. Draw the hypotenuse AB of length 5.6 cm.
2. Draw ∠BAX=30° and ∠ABY=60°
3. The ray AX and BY intersect at C.

Then, ABC is the required triangle.