SHIKSHA CLASSES

Subject : Geometry **Answer Paper** **Total Marks : 20**

Class : X **4. Geometric Construction**

Q.1 A) Choose the correct alternative from objectives given below. 2

Ans: 1) The maximum number of tangents that can be drawn to a circle from a point out side it is **2** .

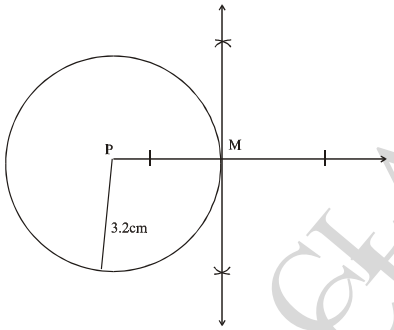
2) What is the point of concurrence of the altitudes of a triangle known as?

Ans: Orthocenter

B) Attempt Any ONE of the following. 1

Construct a tangent to a circle with centre P and radius 3.2 cm at any point M on it.

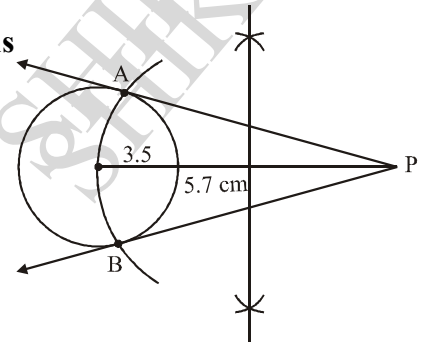
Ans. : Solution :



Q 2 : A) Attempt Any ONE of the following. 2

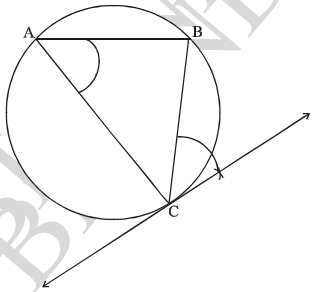
1) Draw a circle with center 'O' and radius 3.5 cm. Take a point P at a distance 5.7 cm from the center. Draw tangents to circle from point P.

Ans



2) Draw a circle of radius 3.6cm. Draw a tangent to the circle at any point on it without using centre.

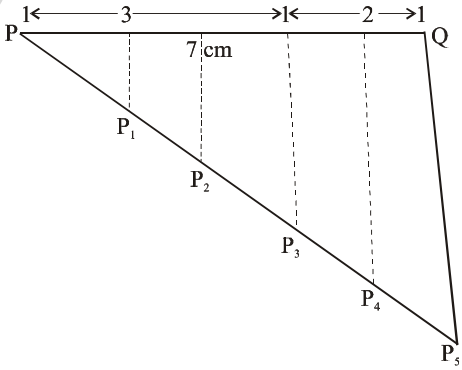
Ans. :



B) Attempt Any ONE of the following. 2

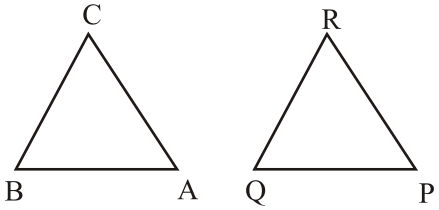
1) Draw seg PQ = 7cm. Divide it in the ratio 3:2.

Ans:



4) ΔABC ~ ΔPQR, in ΔABC, AB = 5.4 cm, BC = 4.2 cm, AC = 6.0 cm. AB : PQ = 3 : 2. Construct ΔABC and ΔPQR.

Ans.:



Rough Figures

SHIKSHA CLASSES, BANDRA

Construct ΔABC of given measure

ΔABC and ΔPQR are simillar

∴ Their corrosponding sides are proportional

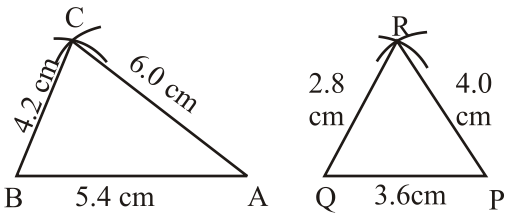
$$\frac{AB}{PQ}=\frac{BC}{QR}=\frac{AC}{PR}=\frac{3}{2} \quad \text{..... (1)}$$

As sides AB, BC, AC are known, we can find the lengths at sides PQ, QR, PR.

Using eqⁿ. (1)

$$\frac{5.4}{PQ}=\frac{4.2}{QR}=\frac{6.0}{PR}=\frac{3}{2}$$

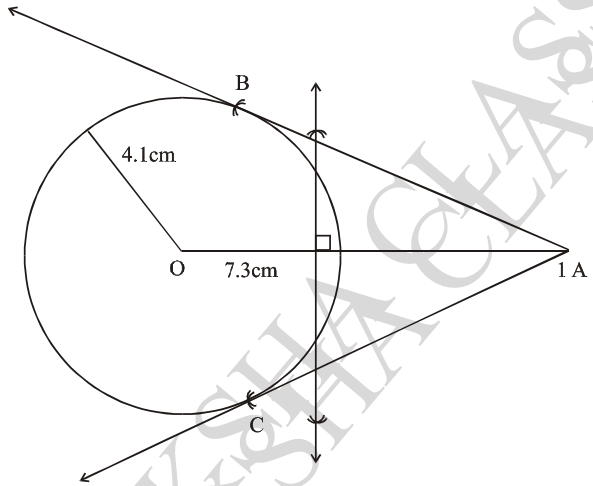
∴ PQ = 3.6 cm, QR = 2.8 cm & PR = 4.0 cm



Q.3: A) Attempt Any ONE of the following. 3

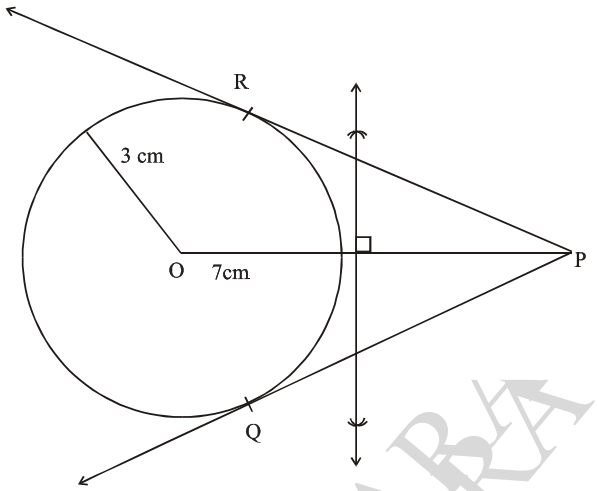
1) Draw a circle with radius 4.1 cm. Construct tangents to the circle from a point at a distance of 7.3 cm from the centre.

Ans. :



2) Draw a circle with centre O and radius 3cm. Take a point P at a distance of 7cm from the centre. Draw tangents to the circle from point P.

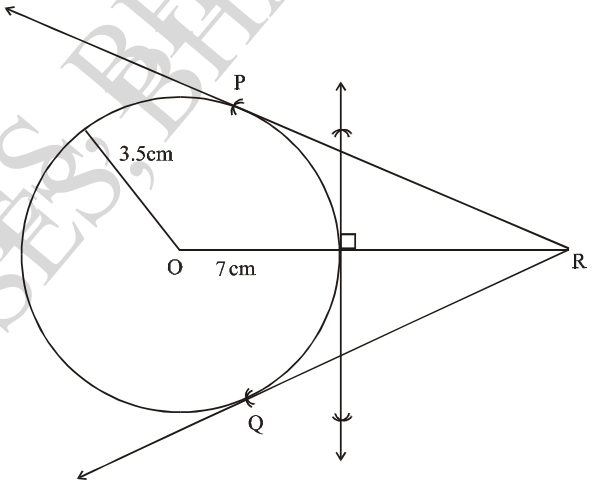
Ans. :



B) Attempt Any ONE of the following. 3

1) Draw a circle of radius 3.5 cm. Take a point R at a distance of 7cm from the centre. Draw tangents to the circle from point R.

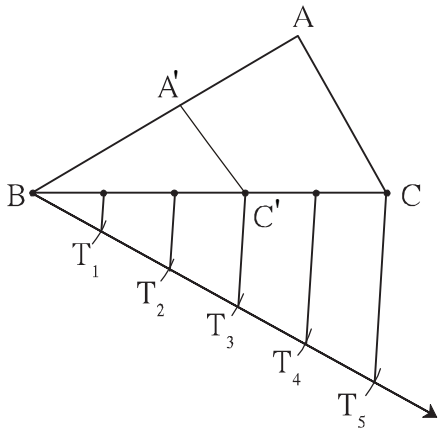
Ans. :



2) Construct any ΔABC construct ΔA'B'C' such that AB : A'B = 5 : 3 and

ΔABC ~ ΔA'BC'

Ans.:



SIKSHA CLASSES, BHANDARA

Q. 4 : Attempt Any ONE of the following. 4

1) $\Delta PQR : \Delta LTR$. In $\Delta PQR, PQ = 4.2cm$ $QR = 5.4cm$ $PR = 4.8cm$. Construct ΔPQR and ΔLTR, Such that $\frac{PQ}{LT} = \frac{3}{4}$.

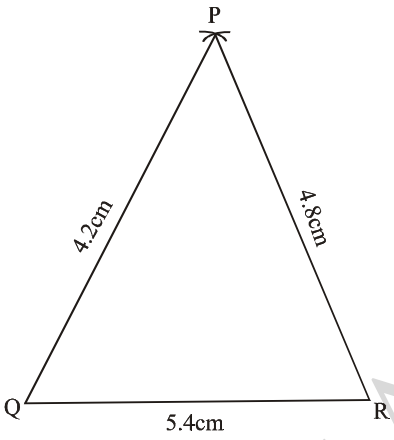
Ans: $\Delta PQR \sim \Delta LTR$, $\frac{PQ}{LT} = \frac{QR}{TR} = \frac{PR}{LT}$

[Corresponding sides are in propotion]

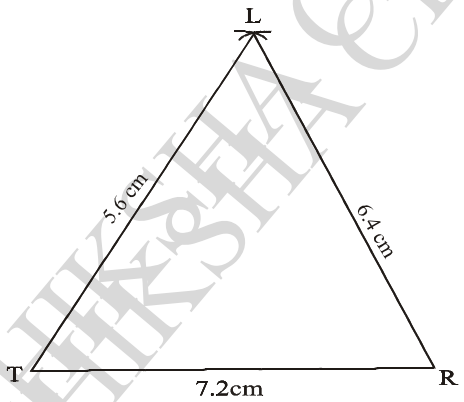
$\therefore \frac{4.2}{LT} = \frac{5.4}{TR} = \frac{4.8}{LR} = \frac{3}{4}\left[\frac{PQ}{LT} = \frac{3}{4}\right]$

$LT = \frac{4.2 \times 4}{3} = 1.4 \times 4 = 5.6\,cm,$

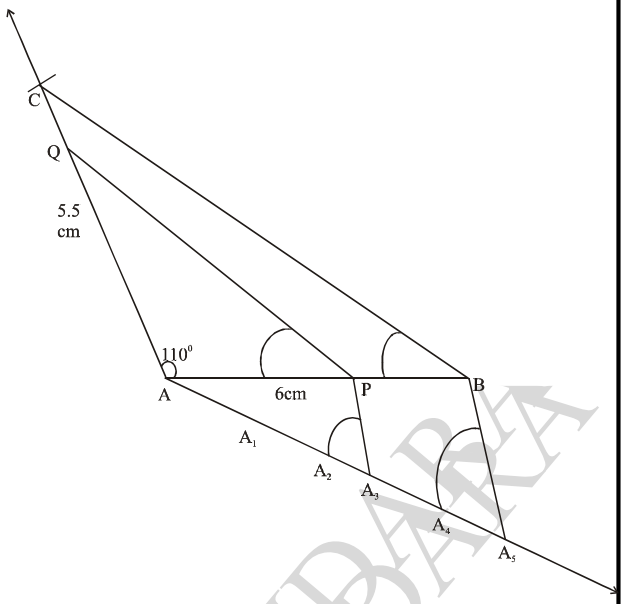
$TR = 7.2cm,\ LR = 6.4cm$



:



2) $\Delta ABC : \Delta APQ$ In $\Delta ABC, AB = 6.0cm$, $\angle BAC = 110^0$, $CA = 5.5cm$. $\frac{BA}{PA} = \frac{5}{3}$ construct ΔAPQ.



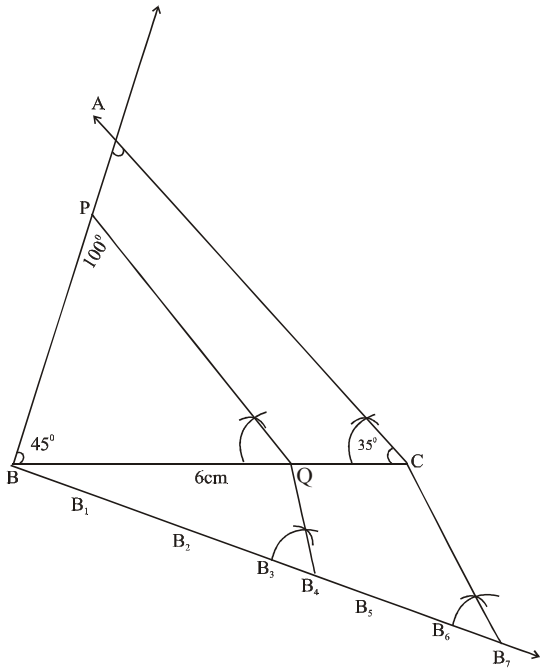
Q. 5 : Attempt Any ONE of the following. 3

1) Draw ΔABC with side BC = 6cm, $\angle B = 45^0$, $\angle A = 100^0$. construct a triangle whose sides are $\frac{4}{7}$ times the corresponding sides of ΔABC.

Ans: In ΔABC, $\angle A + \angle B + \angle C = 180$

$100 + 45^0 + \angle C = 180$

$\angle C = 180 - 145 = 35^0$



ΔPBQ is a required triangle

SHIKSHA CLASSES, BHANDARA

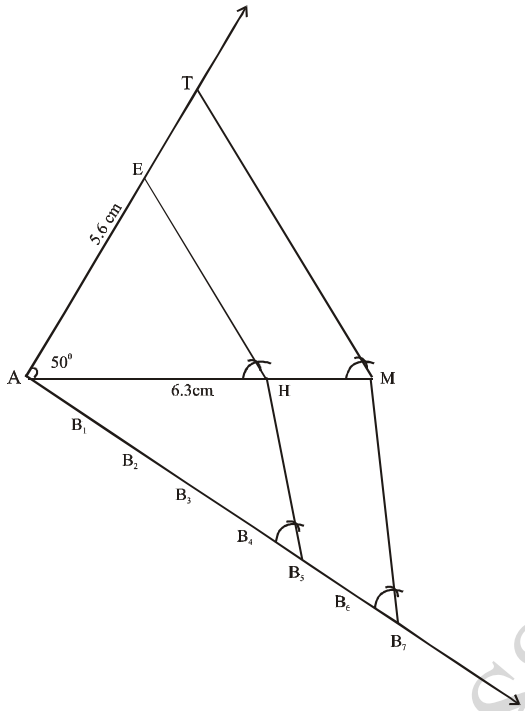
2) $\Delta AMT : \Delta AHE$.

In $\Delta AMT, AM = 6.3cm$,

$\angle TAM = 50^0$, $AT = 5.6cm$

$\frac{AM}{AH} = \frac{7}{5}$ construct ΔAHE.

Ans. :



****

SHIKSHA CLASSES, BHANDARA

BECOME AN ACE IN JEE & NEET

Learn with Jaiswal sir

SHIKSHA CLASSES

Believe & Achieve

JEE | NEET | Previse (8-10)

8625055707 | 8623085707 shikshaclasses.co.in

M-19, MHADA Colony, Khat Road, Bhandara