N.E.S. HIGH SCHOOL,BHANDUP(W)

Std:X,Div:____ V Preliminary Examination Marks:20

Roll No.____ Subject:Mathematics-II Time:1Hr

Q.No.1) Solve the following (10)

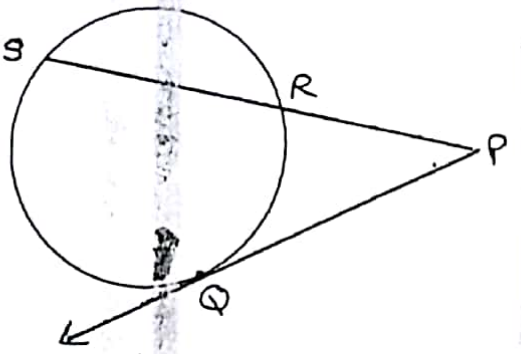
1)Prove that Sec θ(1- Sin θ)(Sec θ +tan θ)= 1

2) Draw a circle with centre P.Draw an arc AC of measure 100° measure .Draw tangents to the circle at point A & B

3) Draw any circle .Take any point A on it and construct tangent at A without using the centre of the circle

4) If tan $\theta = \frac{3}{4}$,find the values of Sec θ *and* $Cos\theta$

5) In figure , ray PQ touches the circle at point Q.
PQ=12,PR=8,find PS and RS



Q.No.2) Solve the following (6)

1) Construct $\triangle$ PYQ such that PY=6.3 cm,YQ=7.2 cm,PQ=5.8cm.
If $\frac{YZ}{YQ} = \frac{4}{5}$ then construct $\triangle$XYZ similar to $\triangle$ PYQ

2) $\triangle$ RST ~ $\triangle$UAY .In $\triangle$ RST ,RS =6 cm ,$\angle S = 50°$,ST =7.5 cm ,$\frac{RS}{UA} = \frac{5}{4}$

Construct $\triangle RST$ And $\triangle UAY$

Q.No 3.) Solve the following (4)

1)The radii of two circular ends of frustrum shape bucket are 14 cm and 7 cm.Height of the bucket is 30 cm.How many litres of water can it hold? (1 litre = 1000 cm^3)

2) Radius of a sector of a circle is 3.5 cm and length of its arc is 2.2 cm .Find the area of the sector?