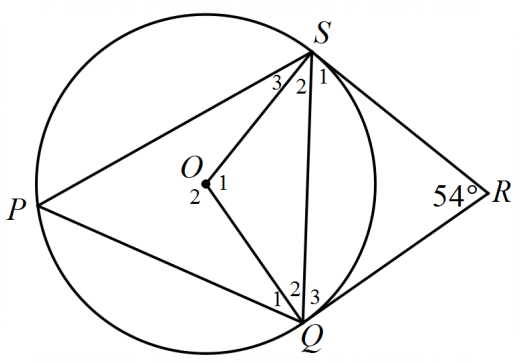
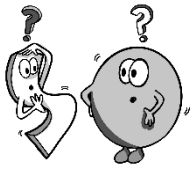
Question 1

In the diagram below, O is the centre of the circle. P, S and Q are points on the circumference of the circle. $S\hat{R}Q = 54°$. SR and QR are tangents of the circle at S and Q respectively.





Determine the size of:

1.1 $\hat{Q}_3$ (4)

1.2 $\hat{P}$ (2)

1.3 $\hat{O}_1$ (2)

Memo

1.1	$RS = RQ$ (tans from same pt) $\therefore \hat{S}_1 = \hat{Q}_3$ ($\angle$s opp equal sides) $\therefore \hat{Q}_3 = 63°$ ($\angle$ sum of Δ)	✓ S ✓ R ✓ S/R ✓ S/R (4)
1.2	$\hat{P} = 63°$ (tan chord thm)	✓ S ✓ R (2)
1.3	$\hat{O}_1 = 126°$ ($\angle$ at centre $= 2 \times \angle$ at circum)	✓ S ✓ R (2)