

1) i) Mention Pythagorean relation.
ii) If PQR is a right angled triangle, what is the relation between $\mathrm{PQ}, \mathrm{QR}$ and PR .

2) Find $x$

3) Identify all the right angled triangles in the following figure and write Pythagorean relation for each right angled triangle.

4) Find $x$

5) Piyal says " In ABC right angled triangle, side lengths are $25 \mathrm{~cm}, 24 \mathrm{~cm}$ and 7 cm ". Is it true? Justify your answer.
6) In PQR triangle, side lengths are $17 \mathrm{~cm}, 8 \mathrm{~cm}$ and 15 cm Is it a right angle triangle? Justify your answer.
7) $\quad \mathrm{AB}$ is a chord of a circle and C is the mid point of it. If $\mathrm{ACO}=90^{\circ}, \mathrm{OC}=12 \mathrm{~cm}$ and $\mathrm{AC}=5 \mathrm{~cm}$ find,
i) radius of the circle.
ii) Length of CD

8) To keep a coconut tree in vertical position a supportive rope is attached from top of the tree to 7 m away from the base of the tree If height of the tree is 24 m , find the length of the rope.
9) There are 2 routes to travel from $P$ to $R$.

Route 1 - Travelling 20 km towards West and reach Q and travel towards North and reach R.
Route 2 - Travelling 29 km P to Q in direct path.

If a person took Route 1 to travel from P to R find the distance he traveled more than Route 2 .

