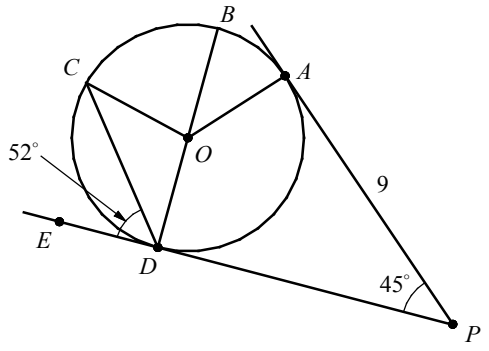
Exercises - Arcs, Angles, and Tangents

Questions 1 - 4 refer to the following information.



In the figure above, $\overline{BD}$ is a diameter, and $\overline{PA}$ and $\overline{PD}$ are tangents to circle O. $m\angle CDE = 52$, $m\angle APD = 45$, and $AP = 9$.

1

What is the measure of $\angle ODC$?

2

What is the measure of $\angle OCD$?

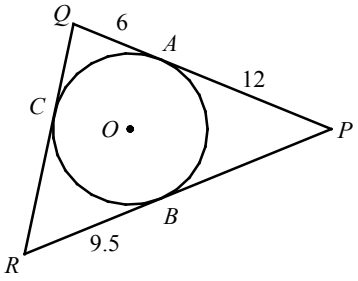
3

What is the measure of $\angle AOD$?

4

What is the length of PD?

5



In the figure above, $\odot O$ is inscribed in ΔPQR. If $PA = 12$, $QA = 6$, and $RB = 9.5$, what is the perimeter of ΔPQR?

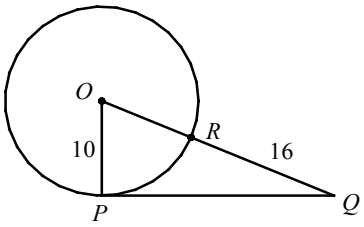
A) 46

B) 49

C) 52

D) 55

6



In the figure above, $\overline{OP}$ is a radius and $\overline{PQ}$ is tangent to circle O. If the radius of circle O is 10 and $QR = 16$, what is the length of $\overline{PQ}$?

A) 16

B) 20

C) 24

D) 28