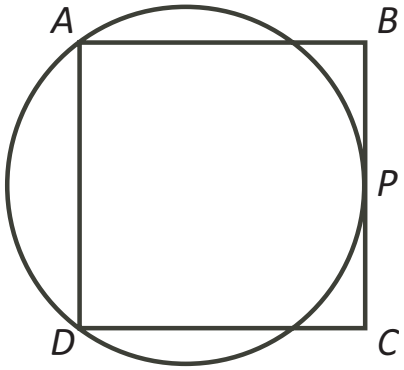
Problem of the Week

Problem E

Off Centre

Square $ABCD$ has sides of length 14 cm. The square is not centered on the circle. It is offset in such a way that A and D are on the circle and side BC is tangent to the circle at point P.

Determine the radius of the circle.



For this problem, the following known result about circles may be useful:

- If a line is tangent to a circle, it is perpendicular to the radius drawn to the point of tangency.