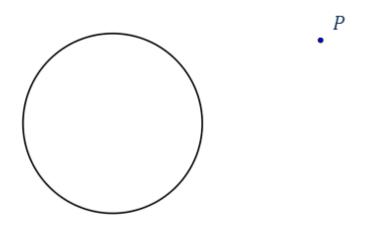
6.7 Off on a Tangent

Practice Tasks

I. Concepts and Procedures

1. Construct the tangent lines from point *P* to the circle given below.



2. Given points *A*, *B*, and *C* so that AB = AC, construct a circle so that \overline{AB} is tangent to the circle at *B* and \overline{AC} is tangent to the circle at *C*.

II. Reasoning

1. Prove Thales' theorem: If *A*, *B*, and *P* are points on a circle where \overline{AB} is a diameter of the circle, then $\angle APB$ is a right angle.

2. Prove the converse of Thales' theorem: If \overline{AB} is a diameter of a circle and P is a point so that $\angle APB$ is a right angle, then P lies on the circle for which \overline{AB} is a diameter.

3. Prove that if segments from a point *P* are tangent to a circle at points *A* and *B*, then $\overline{PA} = \overline{PB}$.

