Name: _____
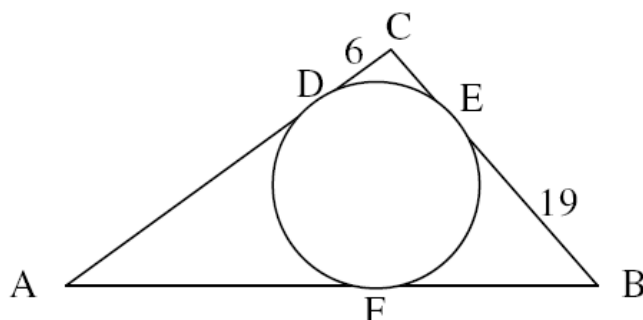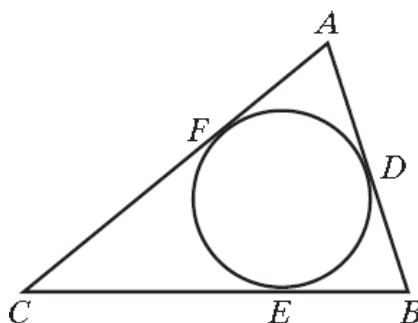
Tangents and Secants

Exercise 1: Find the perimeter of the triangle, given that *AD = CB*


Exercise 2: ⊿ ABC is circumscribed about the circle of center O. D, E, and F are points of tangency.

1) If AD=5, EB=5, and CF=10, find the lengths of the sides of the triangle and show that the triangle is an isosceles triangle.

2) If AF=10, CE=20, and BD=30, find the lengths of the sides of the triangle and show that the triangle is a right triangle.

Exercise 3: $\overline{PQ}$ is tangent to circle of center O at point P, $\overline{SQ}$ is tangent to the circle of center O at point S, and $\overline{OQ}$ intersects the circle at T and R.
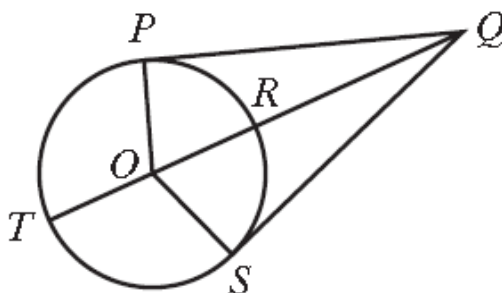
1) If OP=25 and PQ=24, find: OP, RT, and RQ.
2) If OP=10 and OQ=26, find: PQ, RQ, and TQ.
3) If OS=9 and RQ=32, find: OQ, SQ, and PQ.
4) If PQ=3x, SQ=5x-8, and OS=x+1, find: PQ, SQ, OS, and OQ.