Lesson 10.3 Practice: Tangents

School Launch · Geometry · Unit 10: Circles · Worksheet A

Calculator allowed

Name _____ Date _____ Score _____ / 10

Show your work under each problem, one step per line, and check your answer. Word problems: name the unknown, write the equation, solve, and answer in a sentence with units.

1. $\overline{PA}$ is tangent to circle O at A. $OA = 20$ and $PA = 21$. Find OP. EASY

2. $\overline{PA}$ is tangent to circle O at A. $OA = 6$ and $PA = 8$. Find OP. EASY

3. $\overline{PA}$ is tangent to circle O at A. $OA = 8$ and $PA = 15$. Find OP. EASY

4. Two tangent segments from the same exterior point measure $4x + 6$ and $5x - 1$. Find x and the length.

MEDIUM

5. Two tangent segments from the same exterior point measure $4x + 5$ and $2x + 13$. Find x and the length.

MEDIUM

6. Two tangent segments from the same exterior point measure $5x - 1$ and $4x + 6$. Find x and the length.

MEDIUM

7. Two tangent segments from the same exterior point measure $4x - 3$ and $3x - 1$. Find x and the length.

MEDIUM

8. Two tangent segments from the same exterior point measure $5x + 9$ and $1x + 41$. Find x and the length.

HARD

9. Two tangent segments from the same exterior point measure $4x - 2$ and $2x + 10$. Find x and the length.

HARD

10. Two tangent segments from the same exterior point measure $5x - 4$ and $1x + 20$. Find x and the length.

HARD