

Segments Worksheet

Find the value of x given the chords, secants, and tangents.

Name Answer Key

Circle worksheet #3

Date _____

Block _____

In Exercises 1–6, find x using the given chords, secants, and tangents. Simplify fractions and radicals and round the answer to the nearest tenth. A calculator may be helpful.

1. $90 = 6x$
 $15 = x$

2. $5x = 8x - 48$
 $-3x = -48$
 $x = 16$

3. $6x = 3(10)$
 $6x = 30$
 $x = 5$

4. $3(8) = 2(x+2)$
 $12 = x+2$
 $10 = x$

5. $x^2 = 3(12)$
 $x^2 = 36$
 $x = 6$

6. $36 = 9 + 8x$
 $27 = 8x$
 $9 = x$

7. $36 = 9x^2$
 $4 = x^2$
 $2 = x$

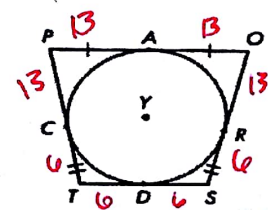
8. $y^2 = 36$
 $y = 6$
 $x^2 = 8(20)$
 $x^2 = 160$
 $x = \sqrt{160}$
 $x = 4\sqrt{10}$

9. $9 \cdot 16 = x \cdot 12$
 $12 = x$
 $3 \cdot 27 = y^2$
 $81 = y^2$
 $9 = y$

10. $4(x+10) = 6(x+4)$
 $16 = 2x$
 $8 = x$

11. $3x = 27$
 $x = 9$

12. Quadrilateral *POST* is circumscribed about circle *Y*. $OR = 13$ and $ST = 12$. What is the perimeter of *POST*?



13. $x^2 = 64$
 $x = 8$

14. $2x = 6$
 $x = 3$

$52 + 24$
 76