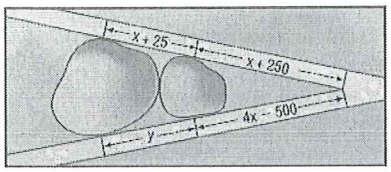
Key

10-5 and 10-6 HW Tangents and Secants

Pg 593 # 3, 5-7, 10, 13-22, 27 and Pg 603 #6-26

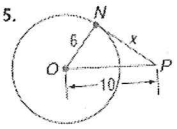
3. LANDSCAPE ARCHITECT A landscape architect is planning to pave two walking paths beside two ponds, as shown. Find the values of x and y. What is the total length of the walking paths?



$x = 250$ $y = 275$ $\therefore$ 1550 units

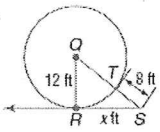
Find x. Assume that segments that appear to be tangent are tangent.

5.



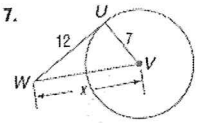
$x = 8$

6.



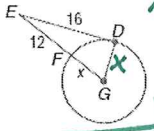
$x = 16$

7.



$x = \sqrt{193}$

10.



$x^2 + 16^2 = (x+12)^2$

$x^2 + 256 = x^2 + 24x + 144$

$-x^2 \qquad -x^2$

$256 = 24x + 144$

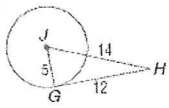
$112 = 24x$

$x = 4.\overline{6}$

$\boxed{x = \frac{14}{3}}$

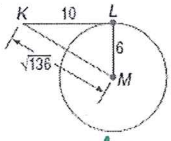
Determine whether each segment is tangent to the given circle.

13. $\overline{GH}$



NO

14. $\overline{KL}$

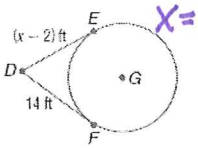


Yes

must Test + show Pyth. thm for both #13 + #14 :) for credit

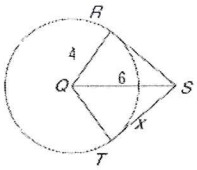
Find x. Assume that segments that appear to be tangent are tangent.

15.



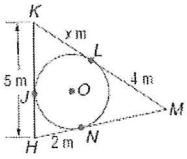
$x = 16$

16.



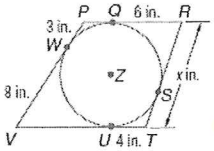
$x = 2\sqrt{5}$

17.



$x = 3$

18.



$x = 10$

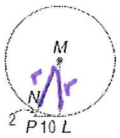
$18^2 + (x+5)^2 = (x+13)^2$

$18^2 + x^2 + 10x + 25 = x^2 + 26x + 169$

$\boxed{P = 58.5 \text{ units}}$

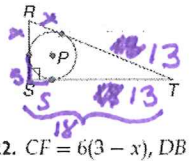
Find the perimeter of each polygon for the given information.

19.



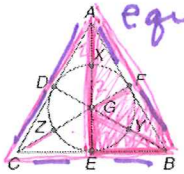
$60 = P$

20. $ST = 18$, radius of $\odot P = 5$



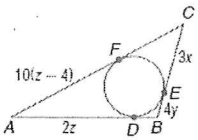
21. $BY = CZ = AX = 2$
radius of $\odot G = 3$

$\therefore$ equilateral $\triangle$



$P = 24$

22. $CF = 6(3 - x)$, $DB = 12y - 4$

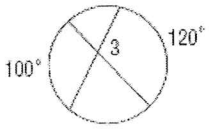


$\boxed{P = 36 \text{ units}}$

Pg 593

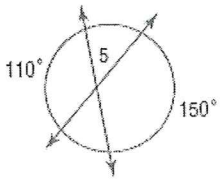
Find each measure.

6. $m\angle 3$ 110°

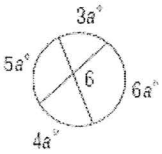


7. $m\angle 4$ 60°

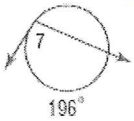
8. $m\angle 5$ 50°



9. $m\angle 6$ 110°

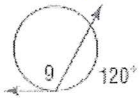


10. $m\angle 7$ 98°

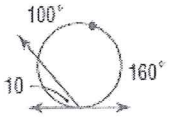


11. $m\angle 8$ 90°

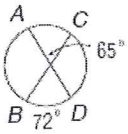
12. $m\angle 9$ 120°



13. $m\angle 10$ 50°

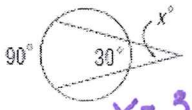


14. $m\widehat{AC}$ 58°



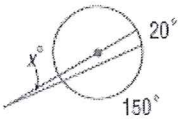
Find x. Assume that any segment that appears to be tangent is tangent.

15.



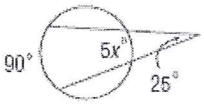
x = 30

16.



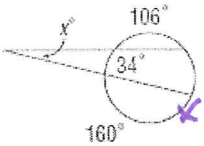
5 = x

17.



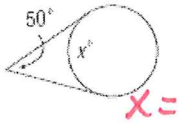
x = 8

18.



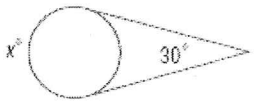
x = 13

19.



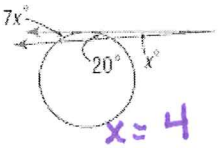
x = 130

20.



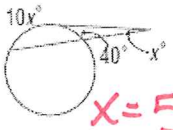
x = 210

21.



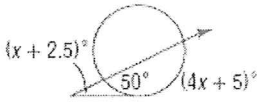
x = 4

22.



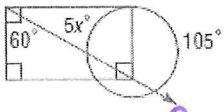
x = 5

23.



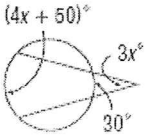
x = 2.5

24.



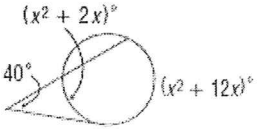
x = 9

25.



x = 10

26.



x = 8

Pg 603