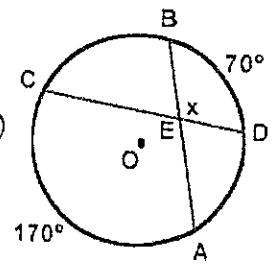
Name: Key

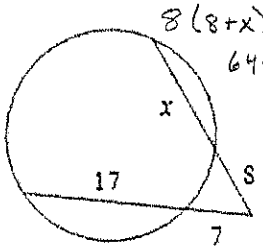
Section 12.10
Review

Solve for x.



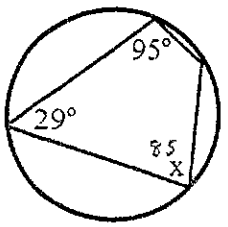
$x = \frac{1}{2}(70+170)$

1. 120°

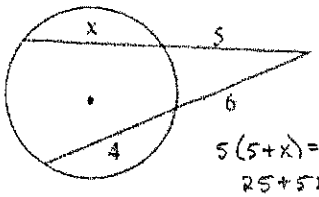


$8(8+x) = 7(24)$
$64+8x = 168$
$8x = 104$
$x = 13$

2. 13

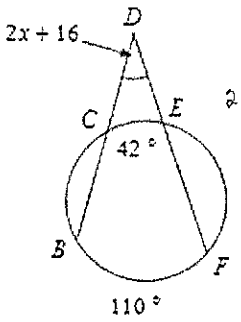


3. 85°



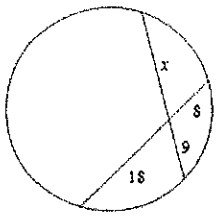
$5(5+x) = 6(10)$
$25+5x = 60$
$5x = 35$
$x = 7$

4. 7



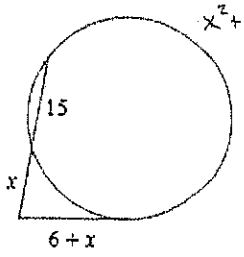
$2x+16 = \frac{1}{2}(110-42)$
$2x+16 = 34$
$2x = 18$
$x = 9$

5. 9



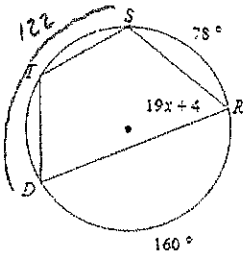
$9x = 8(18)$
$9x = 144$
$x = 16$

6. 16



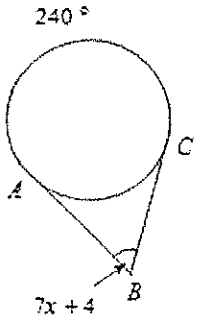
$x(x+15) = (6+x)^2$
$x^2+15x = 36+12x+x^2$
$3x = 36$
$x = 12$

7. 12



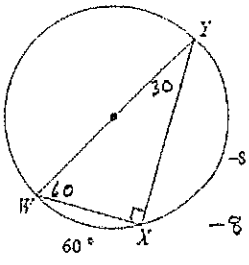
$19x+4 = 61$
$19x = 57$
$x = 3$

8. 3

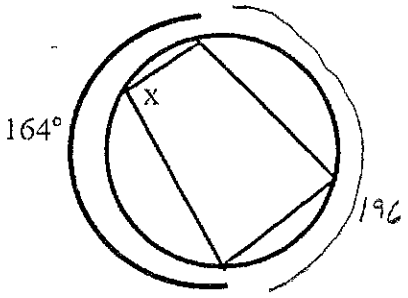


$7x+4 = \frac{1}{2}(240-1$
$7x+4 = 60$
$7x = 56$
$x = 8$

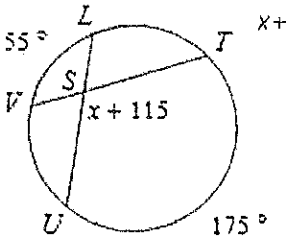
9. 8



$-8+16x=120$
$16x=128$



$x+115=\frac{1}{2}(55+175)$
$x+115=115$
$x=0$

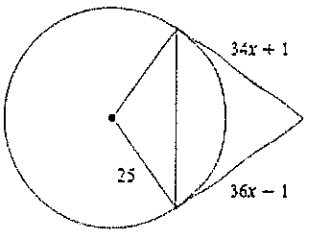


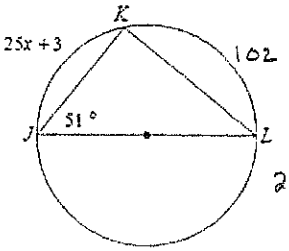
10. 8

11. 98°

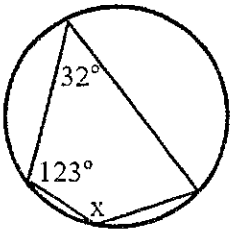
12. 0

$34x+1=36x-1$
$2=2x$
$1=x$





$25x+105=180$
$25x=75$
$x=3$



13. 1

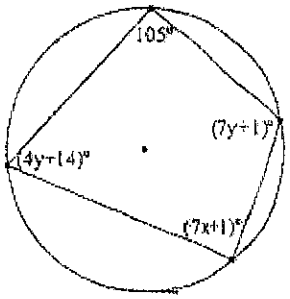
14. 3

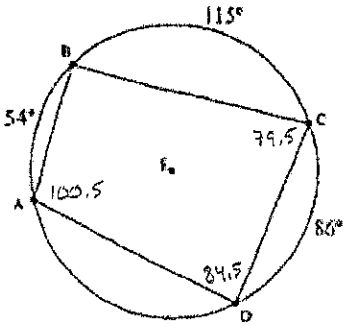
15. 148°

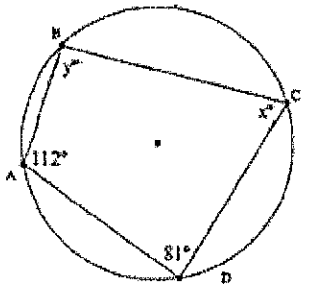
Find the value of the missing variables or parts. Round to the nearest tenth.

$7x+1=75$
$7x=74$

$11y+15=180$
$11y=165$
$y=15$



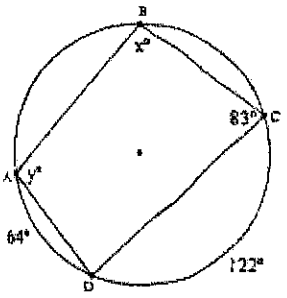


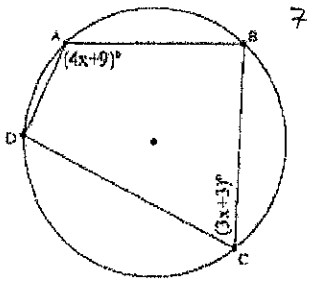


16. x = 10.6
Y = 15

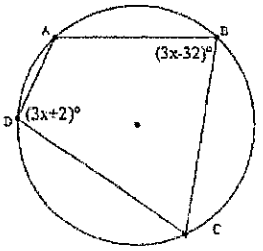
17. $m\angle A$ = 100.5
$m\angle B$ = 95.5
$m\angle C$ = 79.5
$m\angle D$ = 84.5

18. x = 68
y = 99





$7x + 12 = 180$
$7x = 168$
$x = 24$



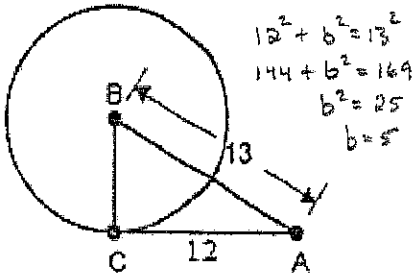
$6x - 30 = 180$
$6x = 210$
$x = 35$

19. x = 93°
y = 97°

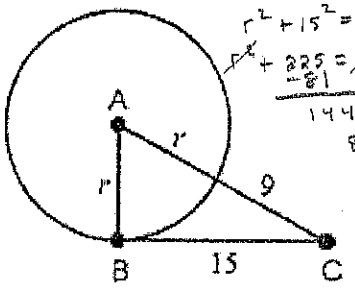
20. x = 24

21. x = 35

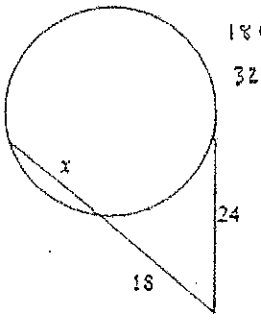
Find the value of the missing variables or parts. Assume that all lines that appear to be tangent to the circle are tangent to the circle. If necessary, round to the tenth.



$12^2 + b^2 = 13^2$
$144 + b^2 = 169$
$b^2 = 25$
$b = 5$



$r^2 + 15^2 = (r+9)^2$
$r^2 + 225 = r^2 + 18r + 81$
$144 = 18r$
$8 = r$

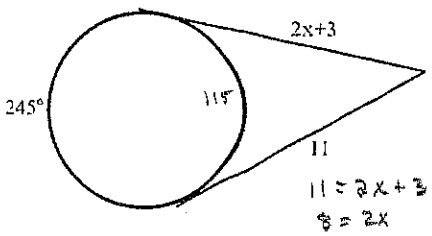


$18(18+x) = 24^2$
$324 + 18x = 576$
$18x = 252$
$x = 14$

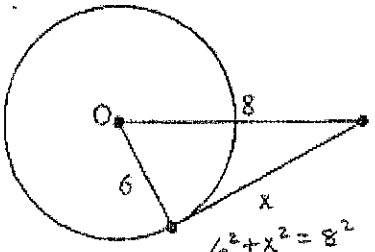
22. $\overline{BC}$ = 5

23. r = 8

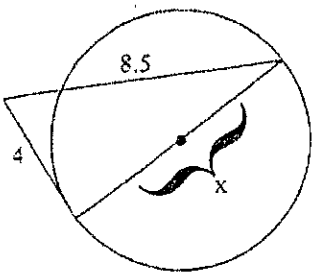
24. x = 14



$11 = 2x + 3$
$8 = 2x$
$4 = x$



$6^2 + x^2 = 8^2$
$36 + x^2 = 64$
$x^2 = 28$



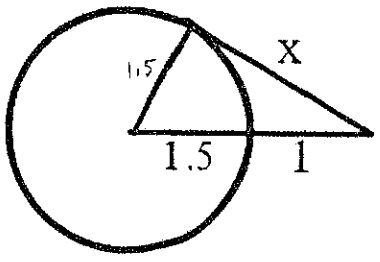
$4^2 + x^2 = 8.5^2$
$16 + x^2 = 72.25$
$x^2 = 56.25$
$x = 7.5$

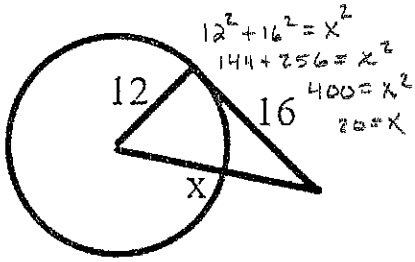
25. x = 4

26. x = 5.3

27. x = 7.5

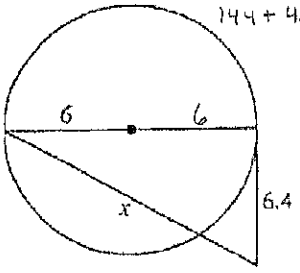
$1.5^2 + x^2 = 2.5^2$
$2.25 + x^2 = 6.25$
$x^2 = 4$
$x = 2$





$12^2 + 16^2 = x^2$
$144 + 256 = x^2$
$400 = x^2$
$20 = x$

$12^2 + 6.4^2 = x^2$
$144 + 40.96 = x^2$

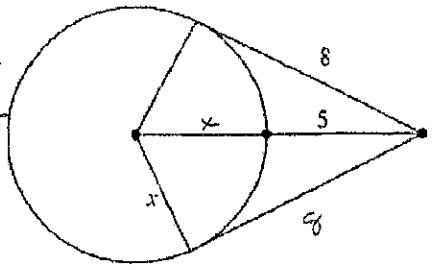


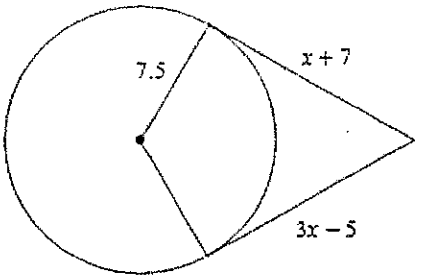
28. x = 2

29. x = 20

30. x = 13.6

$x^2 + 8^2 = (x+5)^2$
$64 = x^2 + 10x + 25$
$39 = 10x$
$3.9 = x$



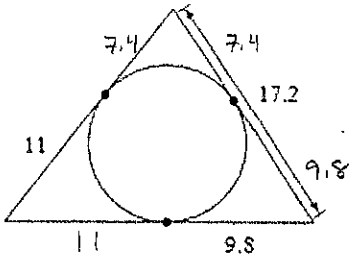


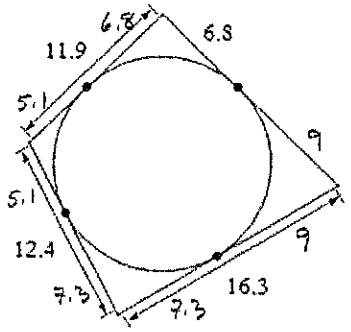
$x + 7 = 3x - 5$
$-x + 5 \quad -x + 5$
$12 = 2x$
$6 = x$

31. x = 3.9

32. x = 6

Find the perimeter of each polygon. Assume that lines which appear to be tangent are tangent.

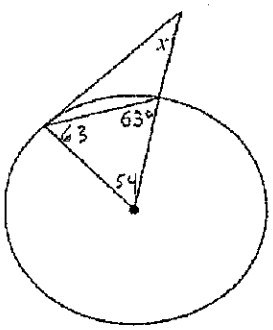


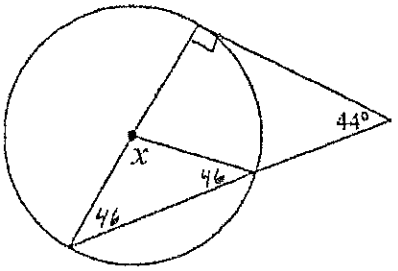


33. 56.4

34. 56.4

Find the angle measure indicated. Assume that lines which appear to be tangent are tangent.

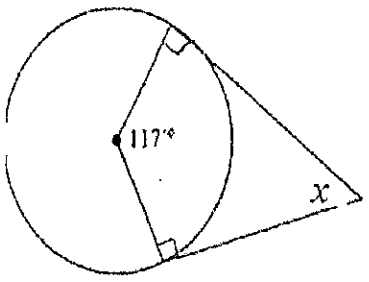


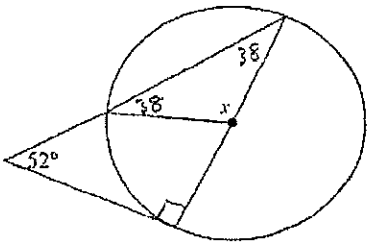


35. x = 36°

36. x = 88°

Find the angle measure indicated. Assume that lines which appear to be tangent are tangent.





37. x = 63°

38. x = 104°