

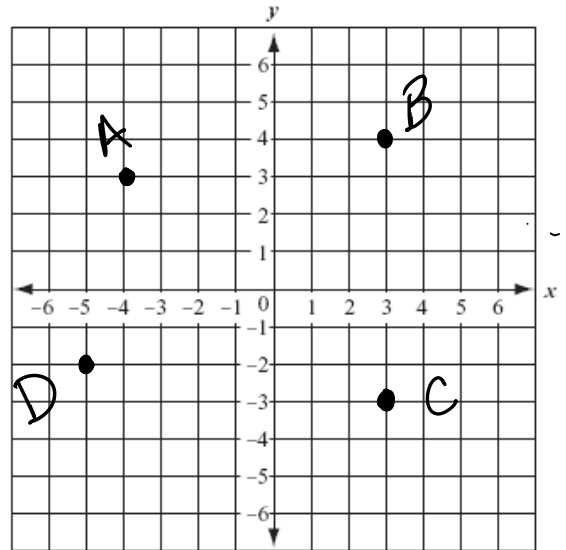
St. Thomas Aquinas – Geometry Test-Out Review

For 1-3, use the diagram at the right to answer the following questions.

1. Find AB. Simplify the radical if necessary.

2. G is the midpoint of \overline{CD} , find G.

3. D is the midpoint of \overline{AE} , find E.



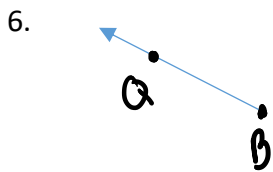
4. A is between C and R. $CA = 3x - 6$, $CR = 8x - 12$, $AR = 2x + 27$. Draw and label the picture.

X= _____, CA= _____, AR = _____

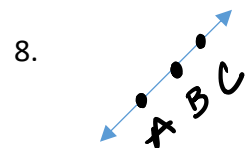
5. \overline{IT} is the angle bisector of $\angle PIG$. $m\angle PIT = 2x + 6$, $m\angle TIG = 7x - 15$. Draw and label the picture.

X= _____, $m\angle TIG =$ _____

Give the notation for each picture. If there is more than one answer, just give one.



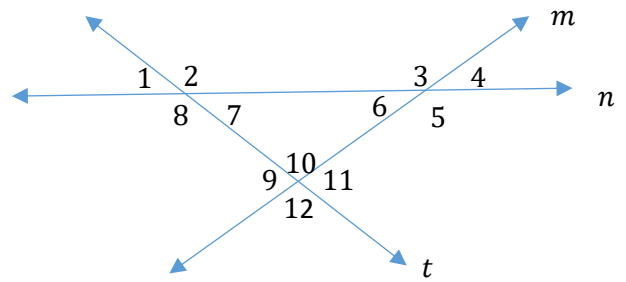




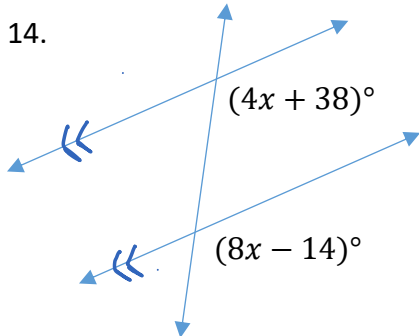
9. The measure of an angle is 63 more than two times the measure of the complement. Find the measure of the two angles.

Name the indicated angle pair and also state the transversal.

10. $\angle 3$ and $\angle 7$ _____, _____
11. $\angle 1$ and $\angle 8$ _____, _____
12. $\angle 4$ and $\angle 9$ _____, _____
13. $\angle 8$ and $\angle 9$ _____, _____

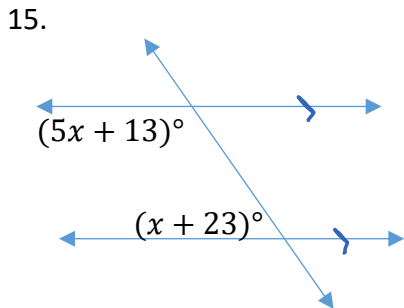


For each problem, name the angle pair, find the value of x , and then find the value of the angles.



Name: _____

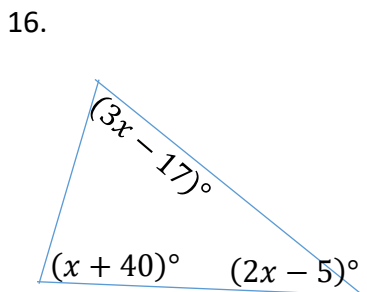
$x =$ _____



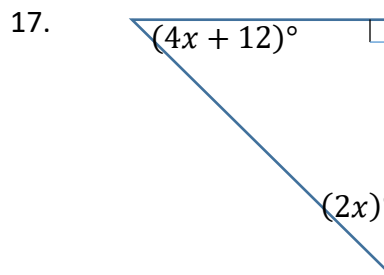
Name: _____

$x =$ _____

Find the value of the variable(s) in each picture. Show work.



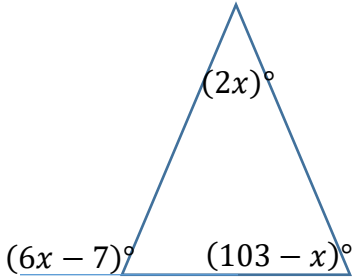
$x =$ _____



$x =$ _____

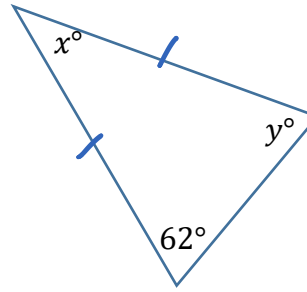
Find the value of the variable(s) in each picture. Show work.

18.



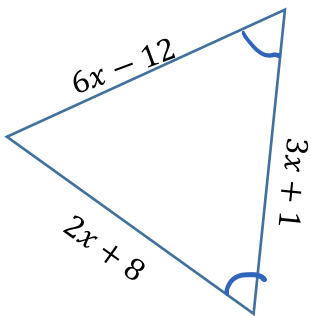
X= _____

19.



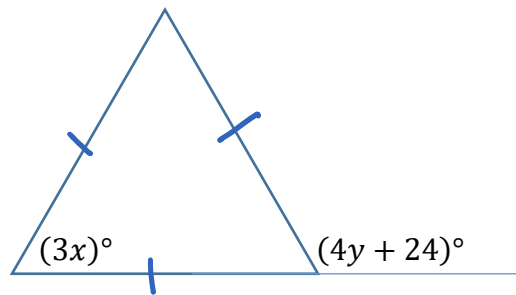
X= _____, Y= _____

20.



X= _____

21.

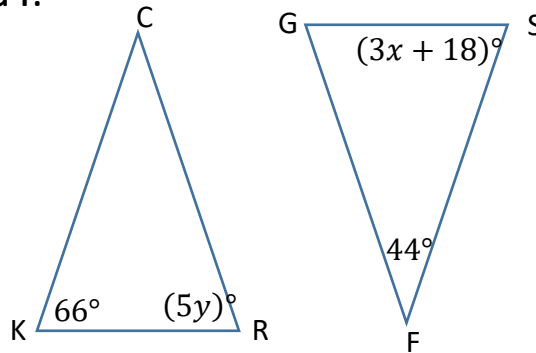


X= _____, Y= _____

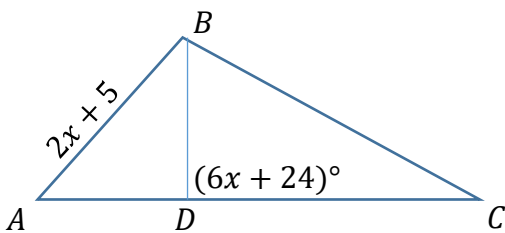
Given $\triangle KCR \cong \triangle SFG$, find the value of X and Y.

22. X= _____

23. Y= _____

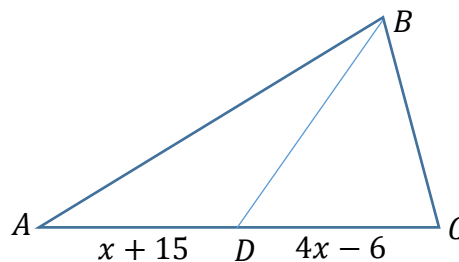


24. \overline{BD} is an altitude of $\triangle ABC$.



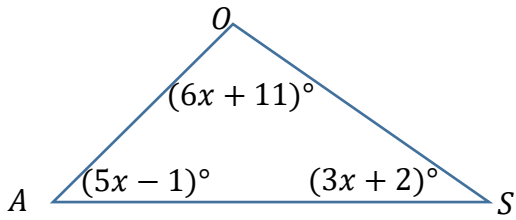
X= _____ AB = _____

25. \overline{BD} is a median of $\triangle ABC$.



X= _____ AC = _____

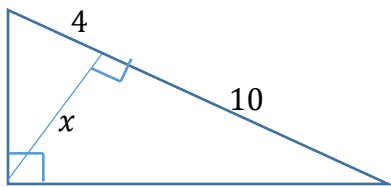
28. Fill in the blanks, then list the sides from *least to greatest*.



X= _____, $m\angle A =$ _____, $m\angle O =$ _____, $m\angle S =$ _____ Sides _____, _____, _____

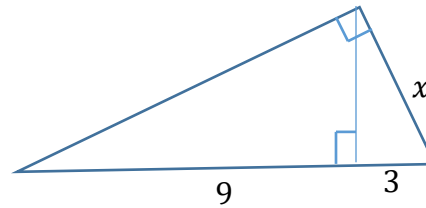
Find the value of the variable(s) in the pictures. Exact answers only...NO DECIMALS!

29.



X= _____

30.



X= _____

Given $\triangle FLY \sim \triangle COW$, use the picture to answer the following questions.

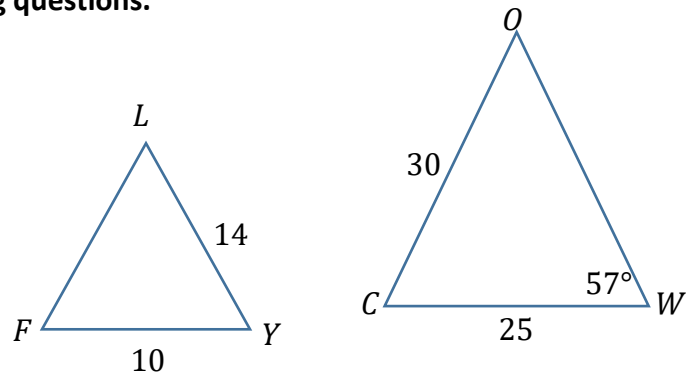
31. What is the scale factor? _____

32. $m\angle Y =$ _____

33. FL= _____

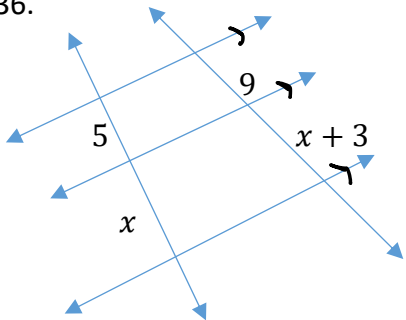
34. OW= _____

35. What is the ratio of the two perimeters? _____



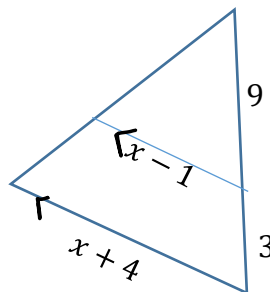
Find the value of X. If necessary, round answers to the nearest 10th.

36.



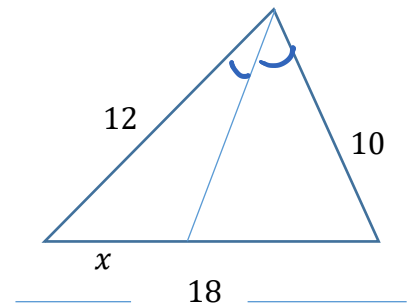
X= _____

37.



X= _____

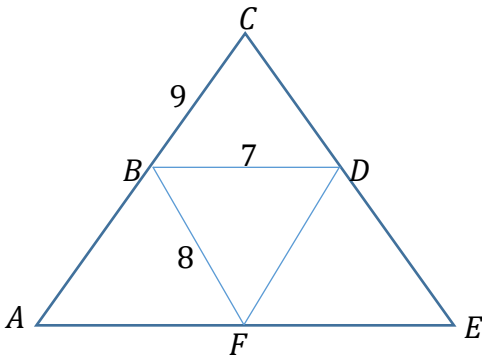
38.



X= _____

Find the indicated values.

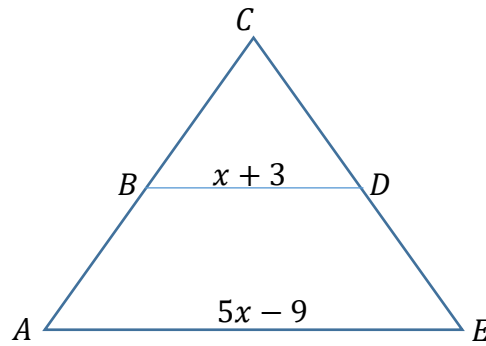
39. $\overline{BD}, \overline{DF}, \overline{BF}$ are midsegments



Perimeter of $\triangle BDF =$ _____

Perimeter of $\triangle ACE =$ _____

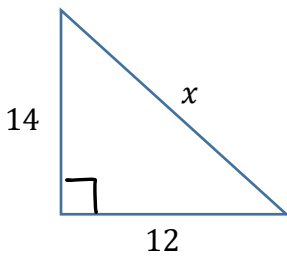
40. \overline{BD} is a midsegment.



$X =$ _____, $BD =$ _____, $AE =$ _____

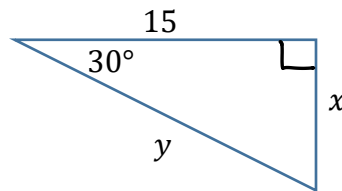
Find the value of variables in each picture. When appropriate, leave answers as simplified radicals or fractions.

41.



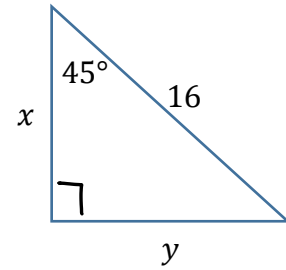
$X =$ _____

42.



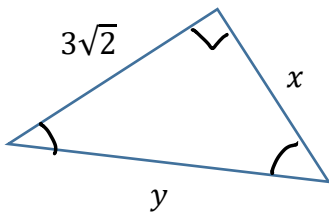
$X =$ _____, $Y =$ _____

43.



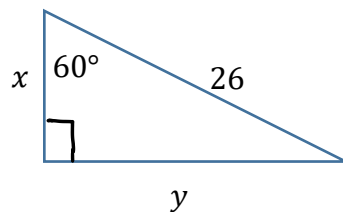
$X =$ _____, $Y =$ _____

44.



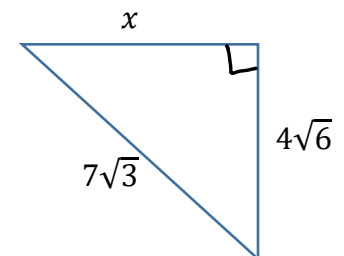
$X =$ _____, $Y =$ _____

45.



$X =$ _____, $Y =$ _____

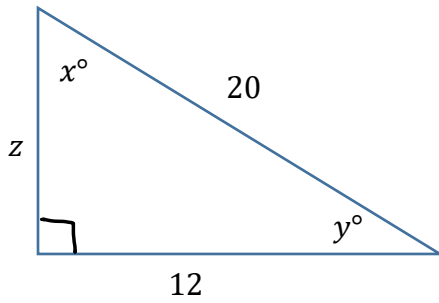
46.



$X =$ _____

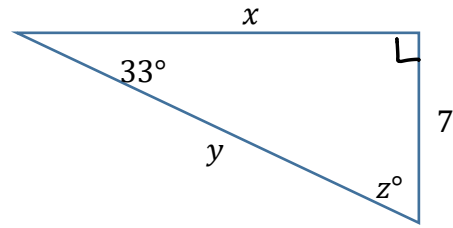
Find the value of the variables. Round sides to the nearest 100th and angles to the nearest whole degree.

47.



X = _____, Y = _____, Z = _____

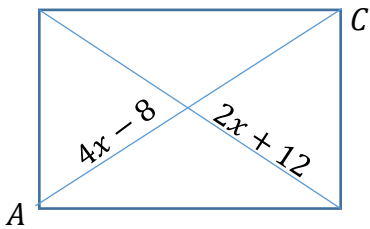
48.



X = _____, Y = _____, Z = _____

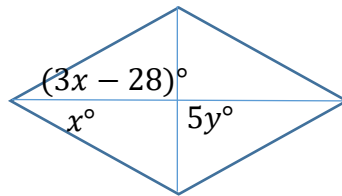
Find the value of the variables in each picture.

49. Rectangle



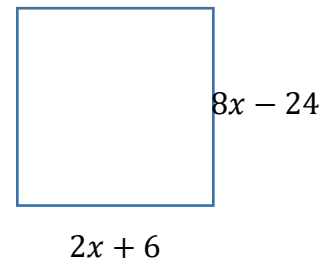
X = _____, AC = _____

50. Rhombus



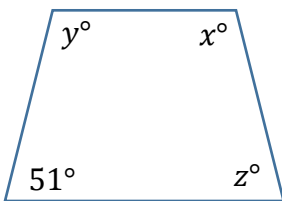
X = _____, Y = _____

51. Square



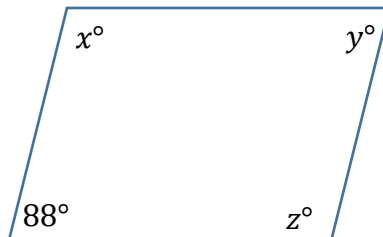
X = _____, Perimeter = _____

52. Isosceles trapezoid



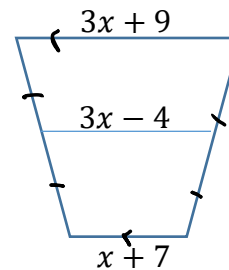
X = _____, Y = _____, Z = _____

53. Parallelogram



X = _____, Y = _____, Z = _____

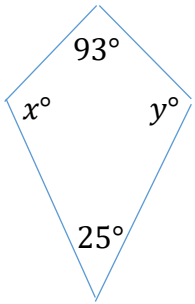
54.



X = _____

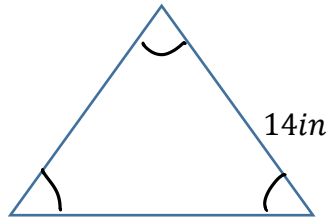
Find the indicated values in each picture.

55. Kite



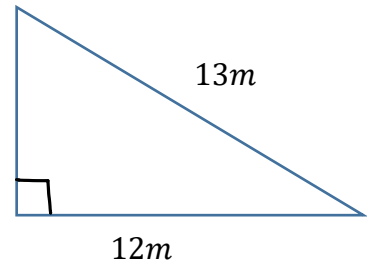
$X = \underline{\hspace{2cm}}$, $Y = \underline{\hspace{2cm}}$

56.



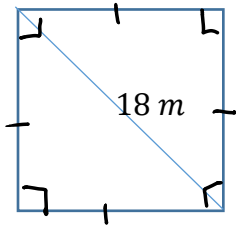
Area = $\underline{\hspace{2cm}}$ (exact)

57.



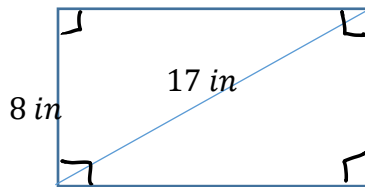
Area = $\underline{\hspace{2cm}}$

58.



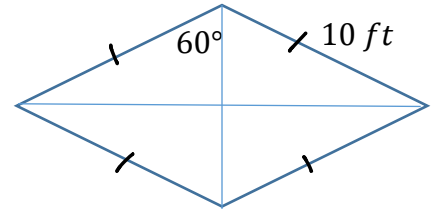
A = $\underline{\hspace{2cm}}$

59.



A = $\underline{\hspace{2cm}}$

60.



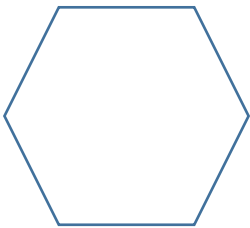
A = $\underline{\hspace{2cm}}$ (exact)

61. What is the measure of one exterior angle in a regular 18-gon.

62. The interior angle of a regular polygon is 140° . Find the number of sides.

63. Find the sum of the interior angles in a regular dodecagon.

64. Fill in the blanks for the regular hexagon. Exact answers only.



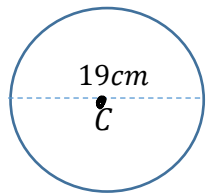
$a = 21in$

Radius = $\underline{\hspace{2cm}}$

Side = $\underline{\hspace{2cm}}$

Area = $\underline{\hspace{2cm}}$

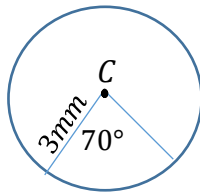
65. Exact answers only.



Circumference = _____

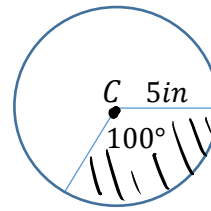
Area = _____

66. Exact answers only.



\widehat{AB} = _____

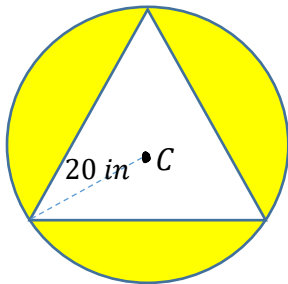
67. Exact answers only.



Shaded area = _____

Find the probability of picking a point in the shaded area. Round your answer to the nearest whole percent.

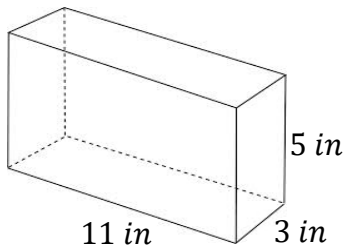
68.



Geometric Probability _____

Fill in the blanks for each figure. Label all of you answers. Exact answers only...no decimals!!

69.

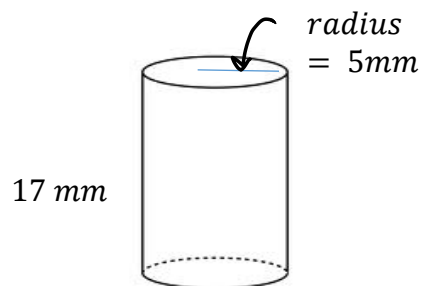


LA = _____

SA = _____

Vol = _____

70.

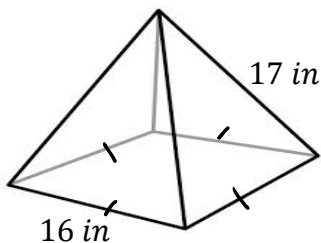


LA = _____

SA = _____

Vol = _____

71.

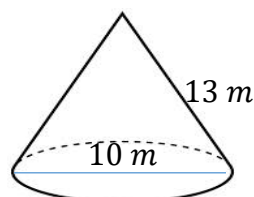


LA = _____

SA = _____

Vol = _____

72.

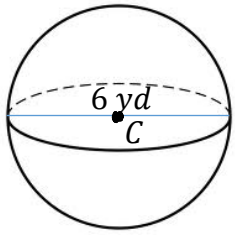


LA = _____

SA = _____

Vol = _____

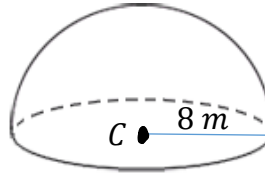
73.



SA = _____

Vol = _____

74.



SA = _____

Vol = _____

75. Write the equation of the circle that has a center of $(-7, 4)$ and the diameter is 12.

Equation _____

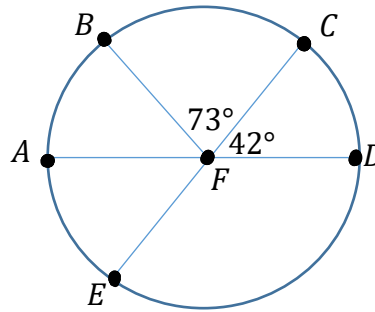
Find the measure of the arc. Then classify that arc as major, minor or semicircle. F is the center of the circle.

76. $m\widehat{AB} =$ _____, _____

77. $m\widehat{BED} =$ _____, _____

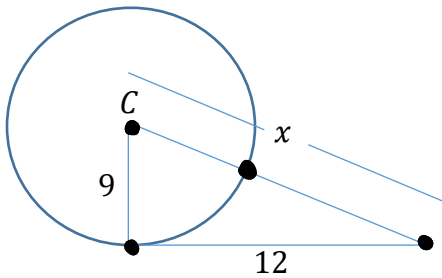
78. $m\widehat{EC} =$ _____, _____

79. $m\widehat{CED} =$ _____, _____



Find the indicated value for each picture. Any segment that appears tangent is tangent. C is the center of both circles.

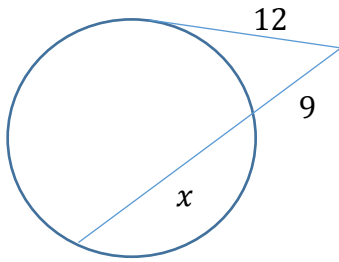
80.



$x =$ _____

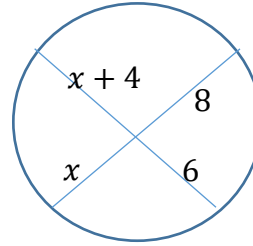
Find the value of X in each picture. Any segment that appears tangent, is tangent.

81.



$X = \underline{\hspace{2cm}}$

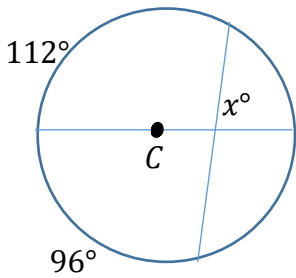
82. Segments do not intersect at the center.



$X = \underline{\hspace{2cm}}$

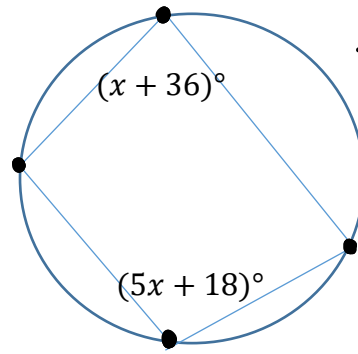
Find the value of the variable(s) in each picture. Any segment that appears tangent, is tangent. When C is marked, it is the center of the circle.

83.



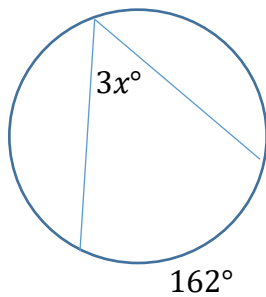
$X = \underline{\hspace{2cm}}$

84.



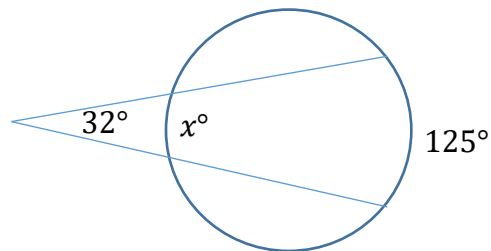
$X = \underline{\hspace{2cm}}$

85.



$X = \underline{\hspace{2cm}}$

86.



$X = \underline{\hspace{2cm}}$