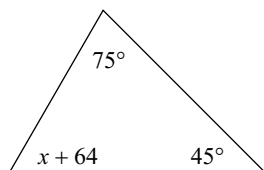


# Triangle and Polygon Review

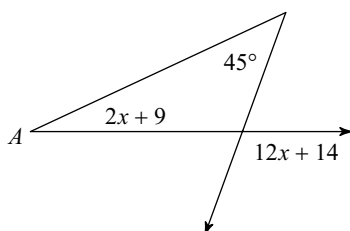
**Solve for  $x$ .**

1)



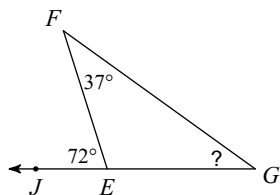
**Find the measure of angle A.**

2)



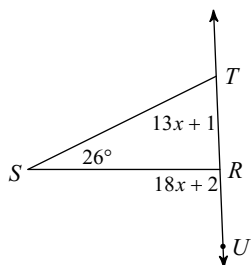
**Find the measure of each angle indicated.**

3)



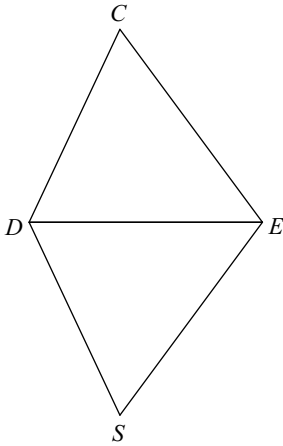
**Find the measure of the angle indicated.**

4) Find  $m\angle STR$ .



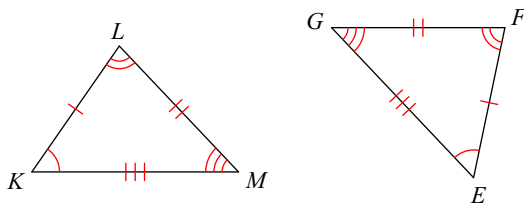
Mark the angles and sides of each pair of triangles to indicate that they are congruent.

5)  $\triangle EDC \cong \triangle EDS$



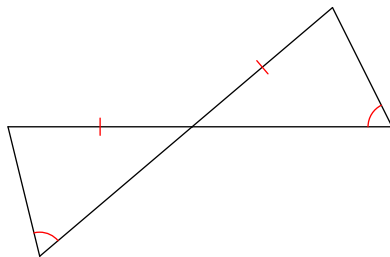
Write a statement that indicates that the triangles in each pair are congruent.

6)

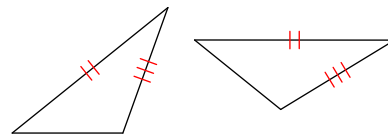


State if the two triangles are congruent. If they are, state how you know.

7)

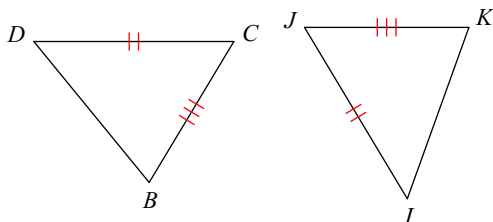


8)

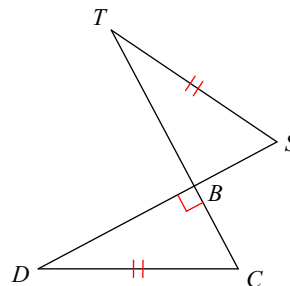


State what additional information is required in order to know that the triangles are congruent for the reason given.

9) SSS

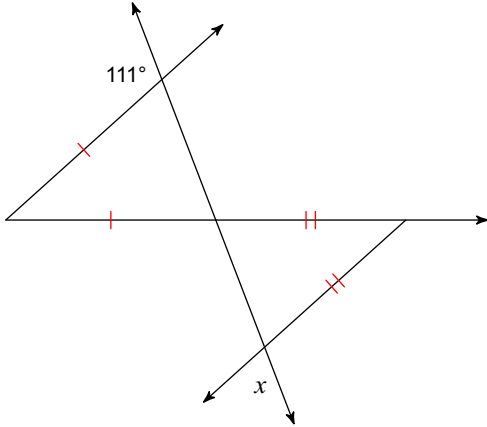


10) HL

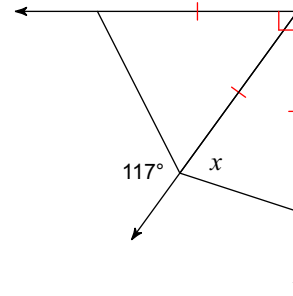


Find the value of  $x$ .

11)

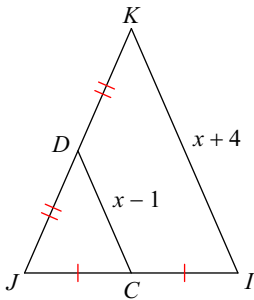


12)



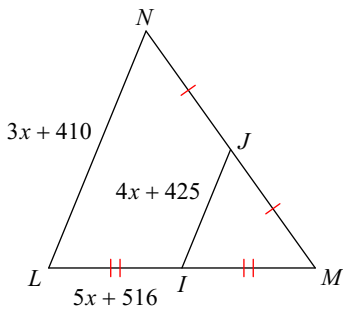
Solve for  $x$ .

13)

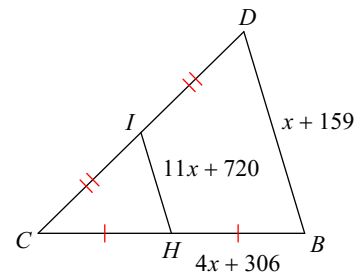


Find the missing length indicated.

14) Find  $JI$

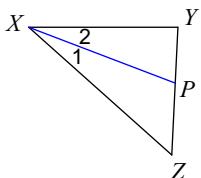


15) Find  $BD$



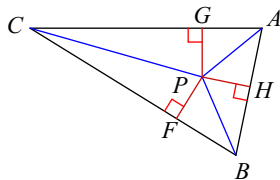
Each figure shows a triangle with one of its angle bisectors.

16) Find  $x$  if  $m\angle 1 = 3x - 6$  and  $m\angle 2 = 2x + 3$ .

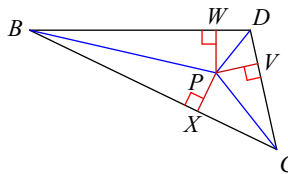


Each figure shows a triangle with its three angle bisectors intersecting at point P.

- 17)  $PG = 2$  and  $AP = 3$ .  
Find  $AG$ .

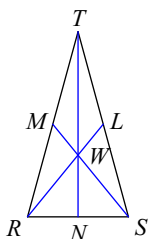


- 18) Find  $DW$  if  $PX = 2$   
and  $DP = 2.24$ .

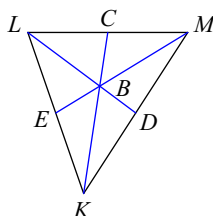


Each figure shows a triangle with one or more of its medians.

- 19) Find  $x$  if  $NS = 2x - 6$  and  $NR = x - 2$

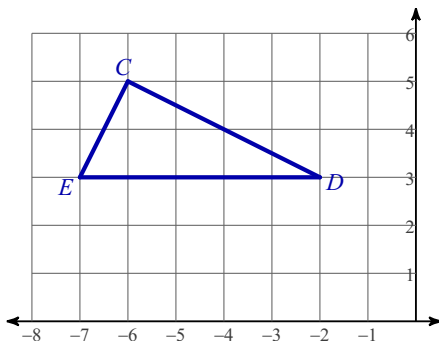


- 20) Find  $x$  if  $MB = 2x - 5$  and  $ME = \frac{4x + 1}{2}$



Find coordinates of the centroid of each triangle.

- 21)



Find the coordinates of the centroid of each triangle given the three vertices.

- 22)  $V(-2, 6)$ ,  $W(12, -7)$ ,  $X(-7, -7)$

State if the three numbers can be the measures of the sides of a triangle.

- 23) 1, 9, 9

- 24) 8, 5, 3

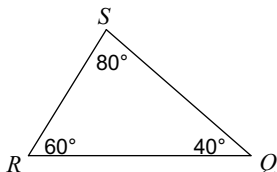
Two sides of a triangle have the following measures. Find the range of possible measures for the third side.

- 25) 6, 12

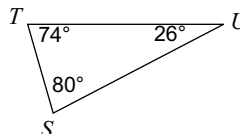
- 26) 10, 9

Order the sides of each triangle from shortest to longest.

- 27)

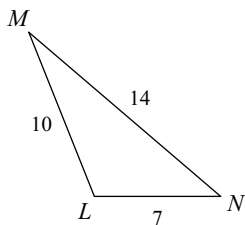


- 28)

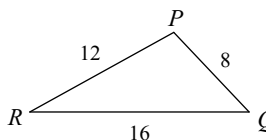


Order the angles in each triangle from smallest to largest.

29)

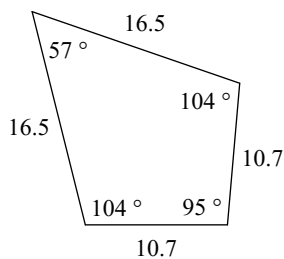


30)



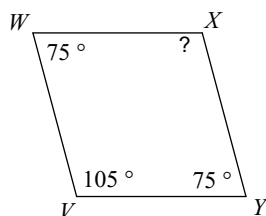
State all possible names for each figure.

31)

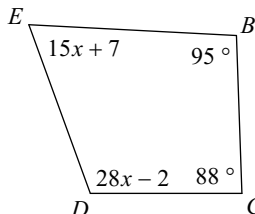


Find the measure of each angle indicated.

32)

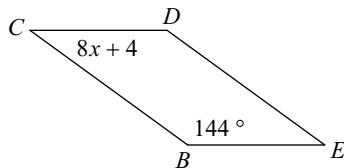


33)  $m\angle D$

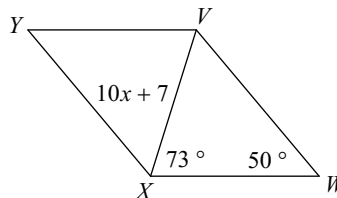


Solve for  $x$ . Each figure is a parallelogram.

34)

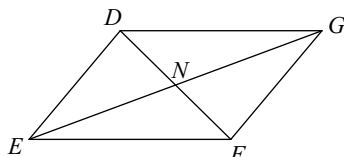


35)



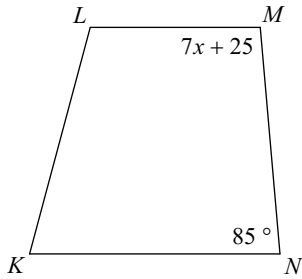
Find the measurement indicated in each parallelogram.

36)  $FN = 2x - 8$   
 $FD = 2x + 2$   
 Find  $FD$

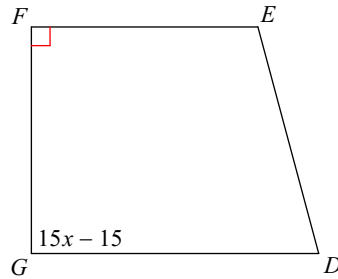


Solve for  $x$ . Each figure is a trapezoid.

37)

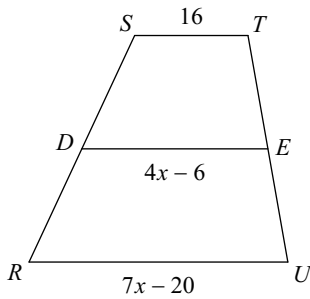


38)



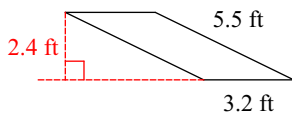
Find the length of the base indicated for each trapezoid.

39) Find  $RU$

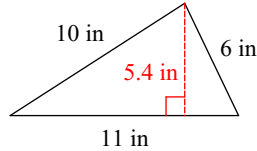


Find the area of each.

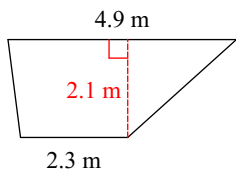
40)



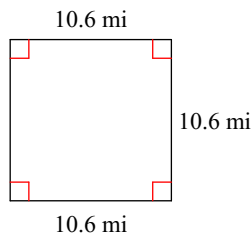
41)



42)

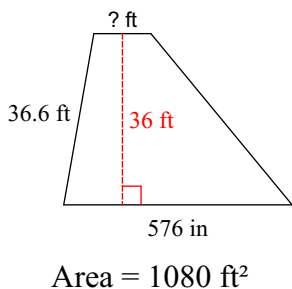


43)

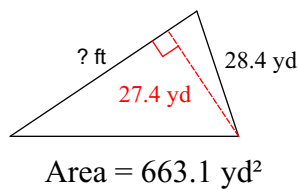


Find the missing measurement. Round your answer to the nearest tenth. Take care to use the correct units.

44)

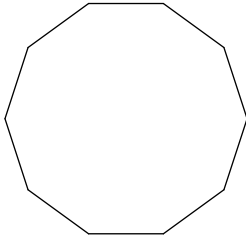


45)

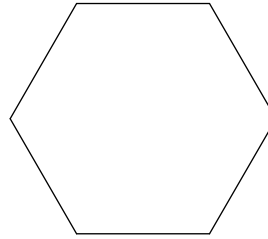


**Write the name of each polygon.**

46)

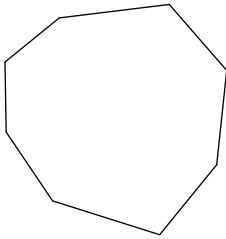


47)

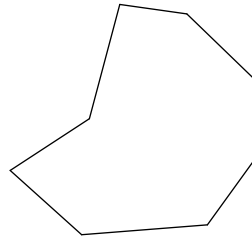


**State if each polygon is concave or convex.**

48)

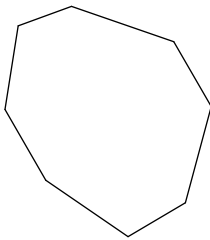


49)

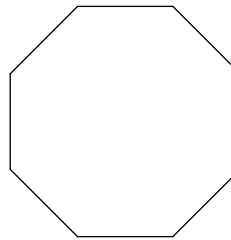


**State if each polygon is regular or not.**

50)

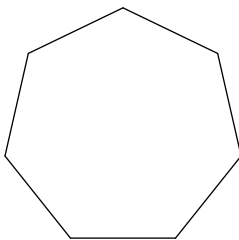


51)

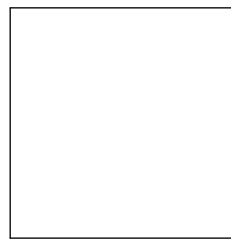


**Find the measure of one interior angle in each regular polygon. Round your answer to the nearest tenth if necessary.**

52)

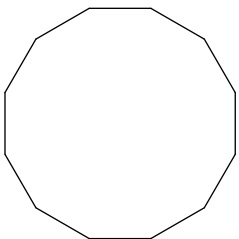


53)

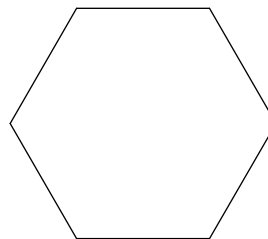


**Find the measure of one exterior angle in each regular polygon. Round your answer to the nearest tenth if necessary.**

54)

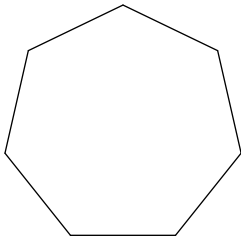


55)

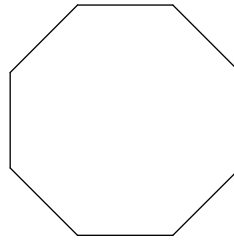


Find the interior angle sum for each polygon. Round your answer to the nearest tenth if necessary.

56)

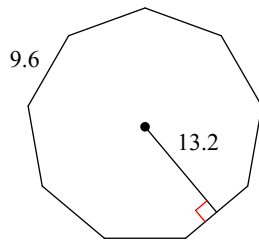


57)

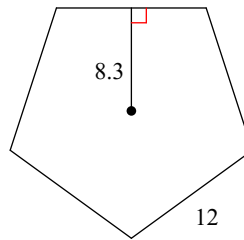


Find the area of each regular polygon. Round your answer to the nearest tenth if necessary.

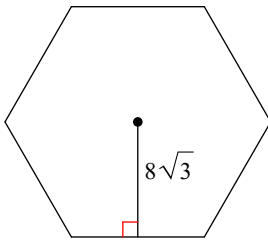
58)



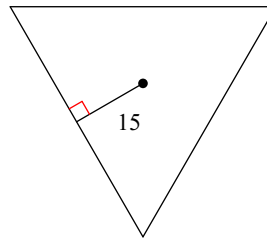
59)



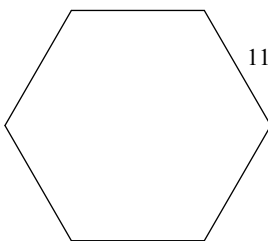
60)



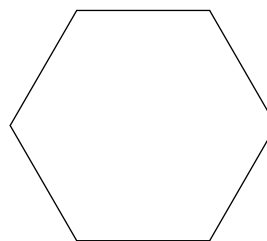
61)



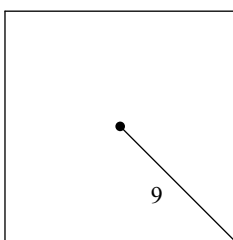
62)



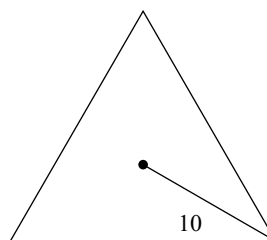
63)



64)



65)





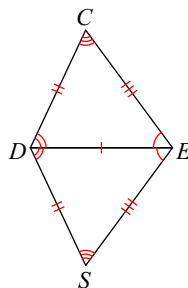
## Answers to Triangle and Polygon Review

1)  $-4$

3)  $35^\circ$

5)

7) AAS



9)  $\overline{BD} \cong \overline{KI}$

17) 2.24

25)  $6 < x < 18$

33)  $110^\circ$

41)  $29.7 \text{ in}^2$

49) concave

57)  $1080^\circ$

65) 129.9

11)  $69^\circ$

19) 4

27)  $\overline{RS}, \overline{QS}, \overline{QR}$

35) 5

43)  $112.36 \text{ mi}^2$

51) regular

59) 249

13) 6

21)  $\left(-5, \frac{11}{3}\right)$

29)  $\angle M, \angle N, \angle L$

37) 10

45) 145.2 ft

53)  $90^\circ$

61) 1169.1

15) 98

23) Yes

31) quadrilateral, kite

39) 36

47) hexagon

55)  $60^\circ$

63) 259.8