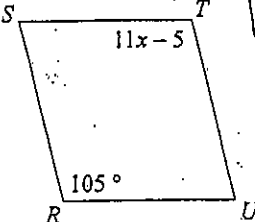
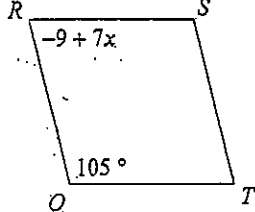
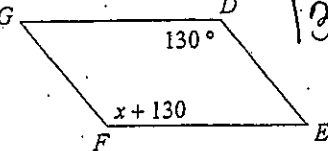
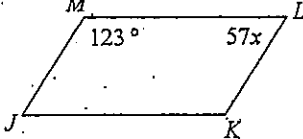


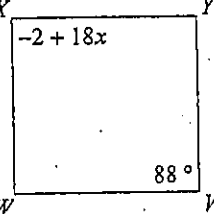
Solve for x . Each figure is a parallelogram.

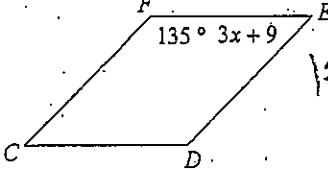
1)  $11x - 5 = 105$
 $11x = 110$
 $x = 10$

2)  $-9 + 7x + 105 = 180$
 $7x + 96 = 180$
 $7x = 84$
 $x = 12$

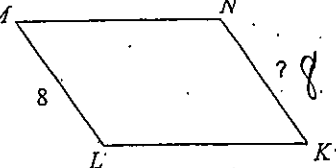
3)  $130 = x + 130$
 $x = 0$

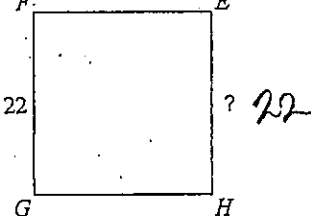
4)  $123 + 57x = 180$
 $57x = 57$
 $x = 1$

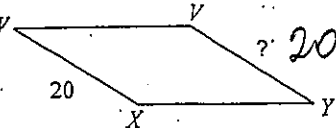
5)  $-2 + 18x = 88$
 $18x = 90$
 $x = 5$

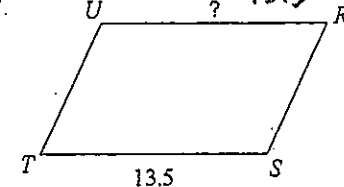
6)  $135 + 3x + 9 = 180$
 $3x + 144 = 180$
 $3x = 36$
 $x = 12$

Find the measurement indicated in each parallelogram.

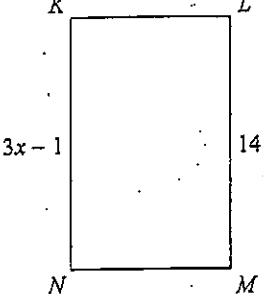
7)  $? = 8$

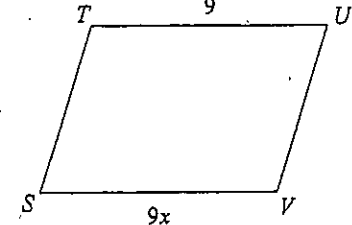
8)  $? = 22$

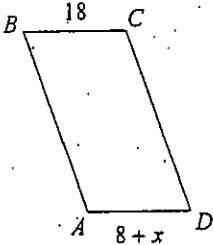
9)  $? = 20$

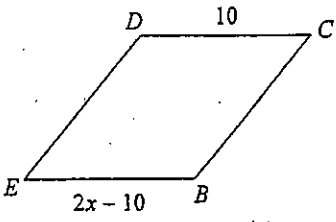
10)  $? = 13.5$

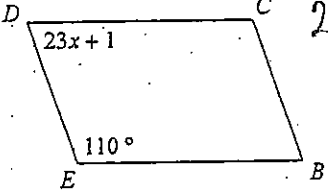
Solve for x . Each figure is a parallelogram.

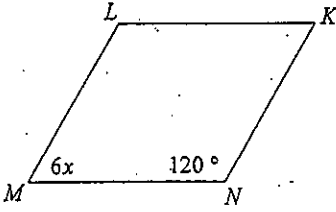
11)  $14 = 3x - 1$
 $15 = 3x$
 $x = 5$

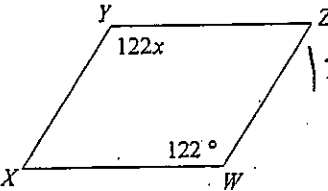
12)  $9 = 9x$
 $x = 1$

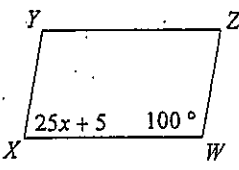
13)  $18 = 8 + x$
 $x = 10$

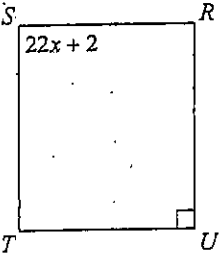
14)  $10 = 2x - 10$
 $20 = 2x$
 $x = 10$

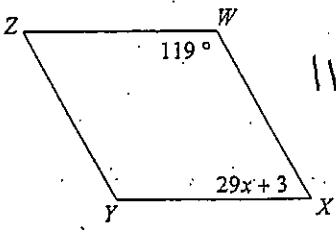
15)  $23x + 1 + 110 = 180$
 $23x + 111 = 180$
 $23x = 69$
 $x = 3$

16)  $6x + 120 = 180$
 $6x = 60$
 $x = 10$

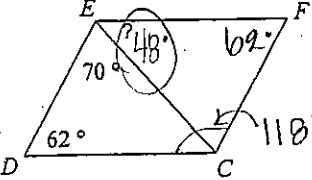
17)  $122x = 122$
 $x = 1$

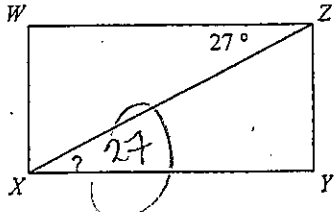
18)  $25x + 5 + 100 = 180$
 $25x + 105 = 180$
 $25x = 75$
 $x = 3$

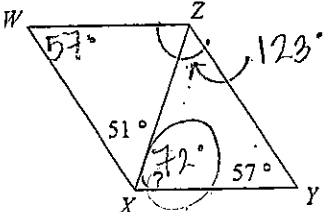
19)  $22x + 2 = 90$
 $22x = 88$
 $x = 4$

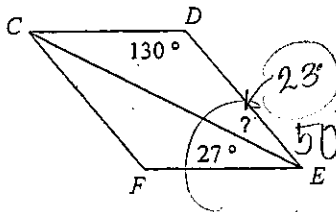
20)  $119 + 29x + 3 = 180$
 $29x + 122 = 180$
 $29x = 58$
 $x = 2$

Find the measurement indicated in each parallelogram.

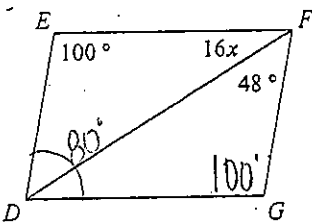
21) 

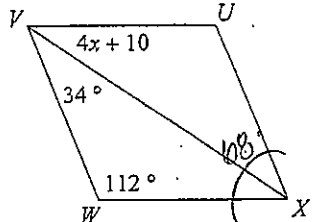
22) 

23) 

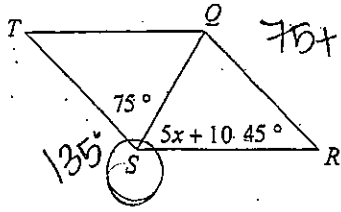
24) 

Solve for x. Each figure is a parallelogram.

25)  $16x + 48 = 80$
 $16x = 32$
 $x = 2$

26)  $-4x + 10 + 34 = 68$
 $-4x + 44 = 68$
 $-4x = 24$
 $x = -6$

27)



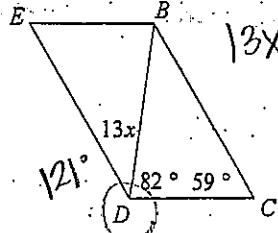
$$75 + 5x + 10 = 135$$

$$5x + 85 = 135$$

$$5x = 50$$

$$x = 10$$

28)

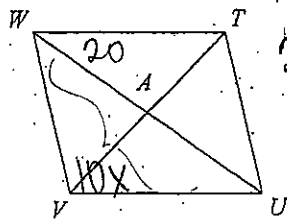


$$13x + 82 = 121$$

$$13x = 39$$

$$x = 3$$

29) $AW = 20$
 $UW = 10x$

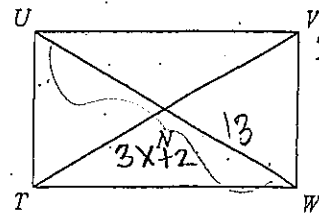


$$2(20) = 10x$$

$$40 = 10x$$

$$x = 4$$

30) $NW = 13$
 $UW = 3x + 2$



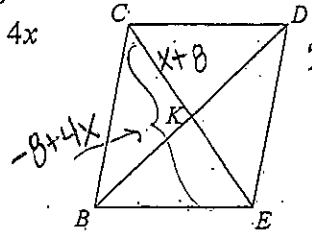
$$2(13) = 3x + 2$$

$$26 = 3x + 2$$

$$24 = 3x$$

$$x = 8$$

31) $CK = x + 8$
 $CE = -8 + 4x$



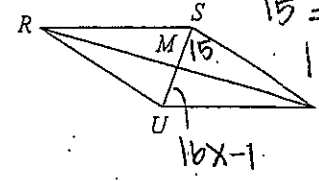
$$2(x + 8) = -8 + 4x$$

$$2x + 16 = -8 + 4x$$

$$24 = 2x$$

$$x = 12$$

32) $SM = 15$
 $MU = 16x - 1$



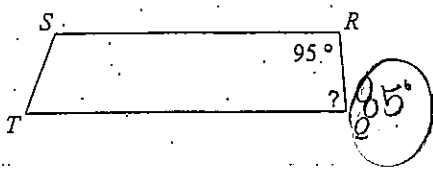
$$15 = 16x - 1$$

$$16 = 16x$$

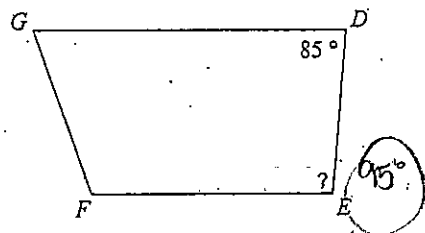
$$x = 1$$

Find the measurement of the angle indicated for each trapezoid.

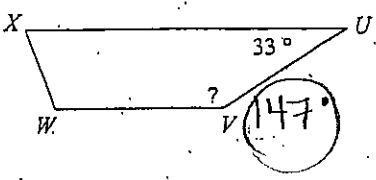
33)



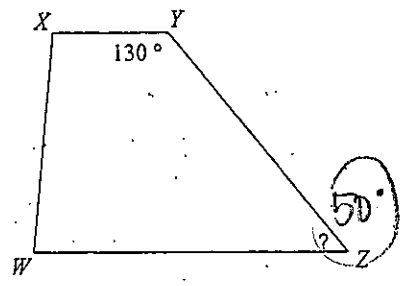
34)



35)

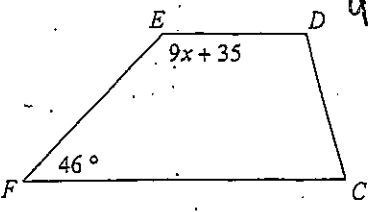


36)



Solve for x. Each figure is a trapezoid.

37)



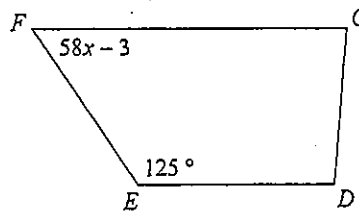
$$9x + 35 + 46 = 180$$

$$9x + 81 = 180$$

$$9x = 99$$

$$x = 11$$

38)



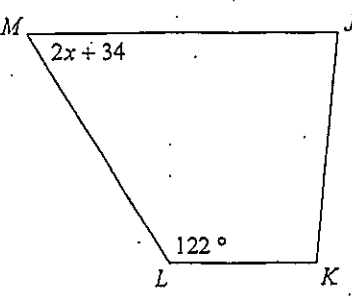
$$58x - 3 + 125 = 180$$

$$58x + 122 = 180$$

$$58x = 58$$

$$x = 1$$

39)



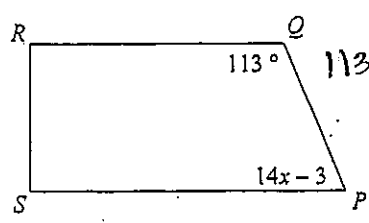
$$2x + 34 + 122 = 180$$

$$2x + 156 = 180$$

$$2x = 24$$

$$x = 12$$

40)



$$113 + 14x - 3 = 180$$

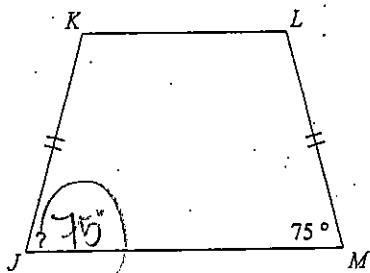
$$14x + 110 = 180$$

$$14x = 70$$

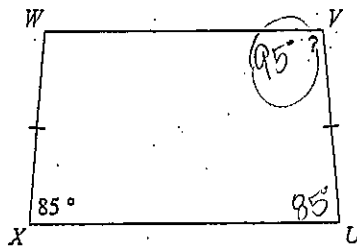
$$x = 5$$

Find the measurement of the angle indicated for each trapezoid.

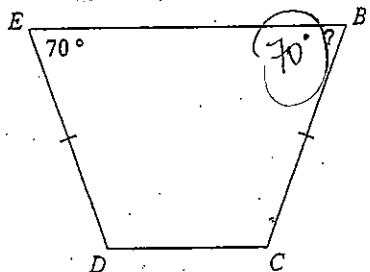
41)



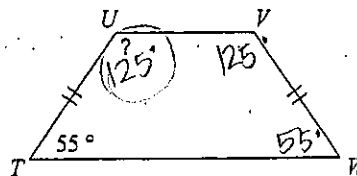
42)



43)

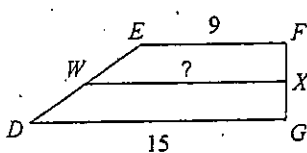


44)



Find the length of the midsegment of each trapezoid.

45)

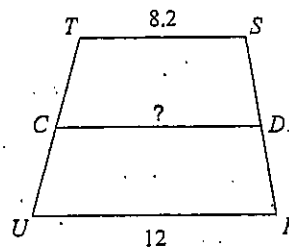


$$WX = \frac{1}{2}(9+15)$$

$$WX = \frac{1}{2}(24)$$

$$WX = 12$$

46)



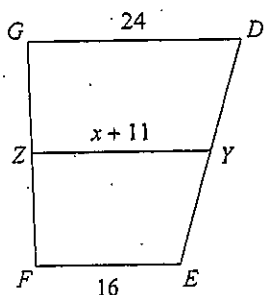
$$CD = \frac{1}{2}(8.2+12)$$

$$CD = \frac{1}{2}(20.2)$$

$$CD = 10.1$$

Solve for x. Each figure is a trapezoid.

47)



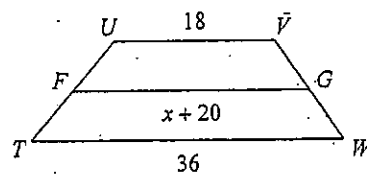
$$x+11 = \frac{1}{2}(24+16)$$

$$x+11 = \frac{1}{2}(40)$$

$$x+11 = 20$$

$$x = 9$$

48)



$$x+20 = \frac{1}{2}(18+36)$$

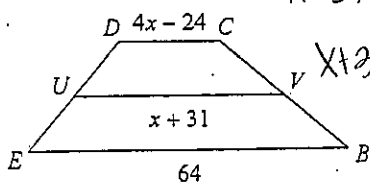
$$x+20 = \frac{1}{2}(54)$$

$$x+20 = 27$$

$$x = 7$$

Find the length of the midsegment of each trapezoid.

49)



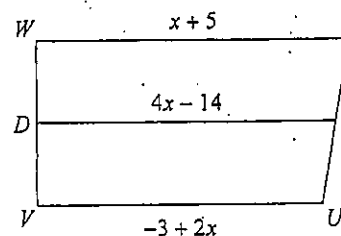
$$x+31 = \frac{1}{2}(4x-24+64)$$

$$x+31 = \frac{1}{2}(4x+40)$$

$$x+31 = 2x+20$$

$$11 = x$$

50)



$$4x-14 = \frac{1}{2}(x+5+(-3+2x))$$

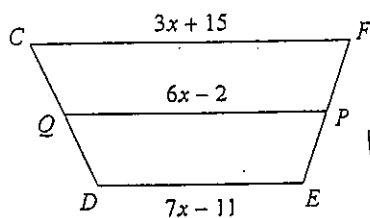
$$4x-14 = \frac{1}{2}(3x+2)$$

$$8x-28 = 3x+2$$

$$5x = 30$$

$$x = 6$$

51)



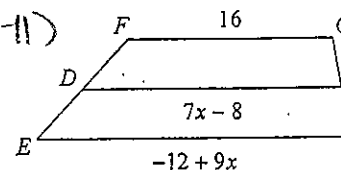
$$6x-2 = \frac{1}{2}(3x+15+7x-11)$$

$$6x-2 = \frac{1}{2}(10x+4)$$

$$6x-2 = 5x+2$$

$$x = 4$$

52)



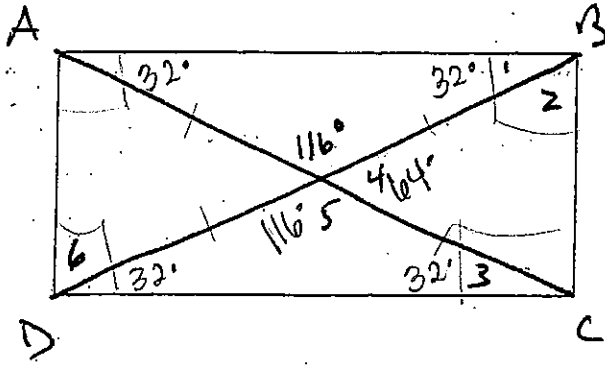
$$7x-8 = \frac{1}{2}(16+(-12+9x))$$

$$7x-8 = \frac{1}{2}(4+9x)$$

$$14x-16 = 4+9x$$

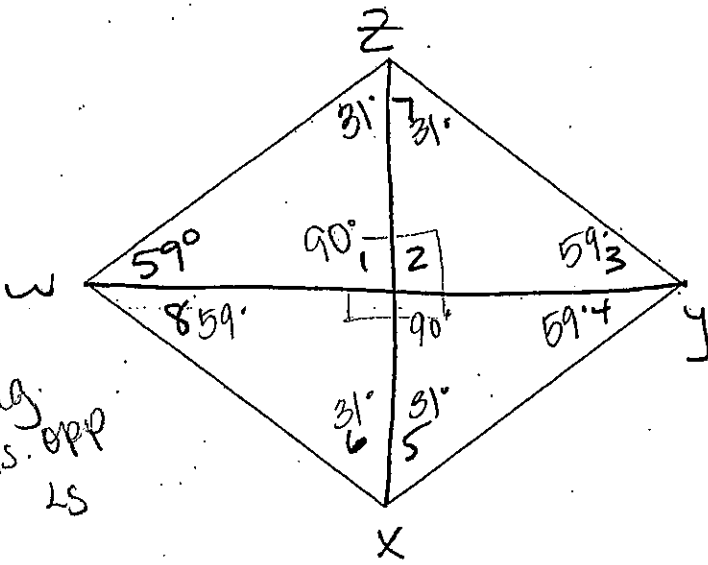
$$5x = 20$$

53) ABCD is a rectangle (page 418)



$$\begin{aligned} m\angle 1 &= \underline{32^\circ} & m\angle 4 &= \underline{64^\circ} \\ m\angle 2 &= \underline{58^\circ} & m\angle 5 &= \underline{116^\circ} \\ m\angle 3 &= \underline{32^\circ} & m\angle 6 &= \underline{58^\circ} \end{aligned}$$

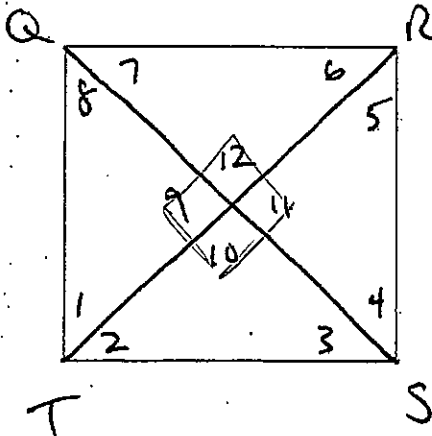
54) WXYZ is a rhombus (page 419)



diag.
bis. opp
LS

$$\begin{aligned} m\angle 1 &= \underline{90^\circ} & m\angle 5 &= \underline{31^\circ} \\ m\angle 2 &= \underline{90^\circ} & m\angle 6 &= \underline{31^\circ} \\ m\angle 3 &= \underline{59^\circ} & m\angle 7 &= \underline{31^\circ} \\ m\angle 4 &= \underline{59^\circ} & m\angle 8 &= \underline{59^\circ} \end{aligned}$$

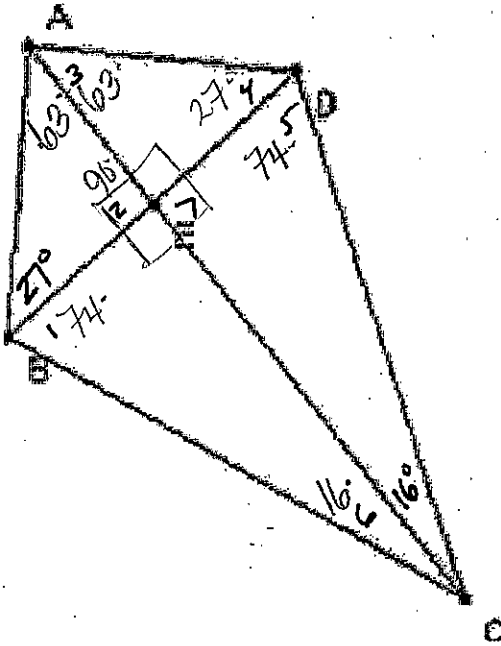
55) QRST is a square (page 418)



diag ⊥
diag bis opps
all ∠s are 90°

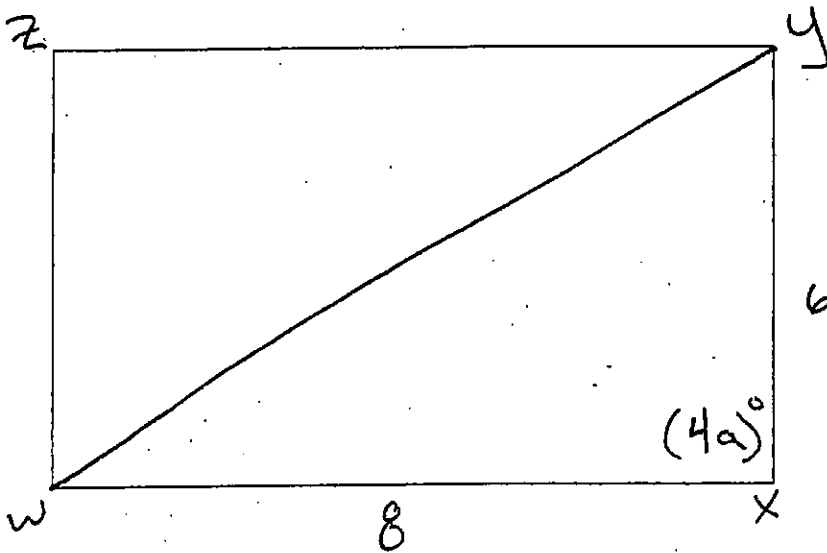
$$\begin{aligned} m\angle 1 &= \underline{45^\circ} & m\angle 7 &= \underline{45^\circ} \\ m\angle 2 &= \underline{45^\circ} & m\angle 8 &= \underline{45^\circ} \\ m\angle 3 &= \underline{45^\circ} & m\angle 9 &= \underline{90^\circ} \\ m\angle 4 &= \underline{45^\circ} & m\angle 10 &= \underline{90^\circ} \\ m\angle 5 &= \underline{45^\circ} & m\angle 11 &= \underline{90^\circ} \\ m\angle 6 &= \underline{45^\circ} & m\angle 12 &= \underline{90^\circ} \end{aligned}$$

56) ABCD is a kite (page 427)



$$\begin{aligned} m\angle 1 &= \underline{74^\circ} & m\angle 5 &= \underline{74^\circ} \\ m\angle 2 &= \underline{90^\circ} & m\angle 6 &= \underline{16^\circ} \\ m\angle 3 &= \underline{63^\circ} & m\angle 7 &= \underline{90^\circ} \\ m\angle 4 &= \underline{27^\circ} & & \end{aligned}$$

57) WXYZ is a rectangle (page 418)



$$\begin{aligned} a &= \underline{22.5} \\ \cancel{WXYZ} &= \underline{10} \end{aligned}$$

$$\begin{aligned} 4a &= 90 \\ a &= 22.5 \end{aligned}$$

$$\begin{aligned} 8^2 + 6^2 &= (WY)^2 \\ 64 + 36 &= (WY)^2 \\ 100 &= (WY)^2 \\ WY &= 10 \end{aligned}$$