

# Chapter 6 Test Review

1)

12.



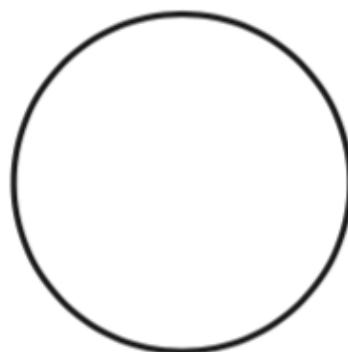
Yes, no curves

13.



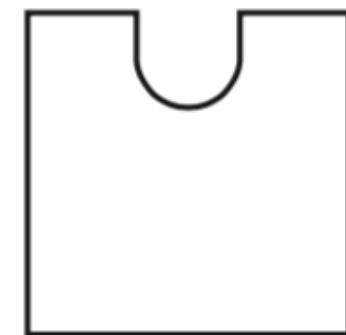
No, not a closed figure

14.



No, curved

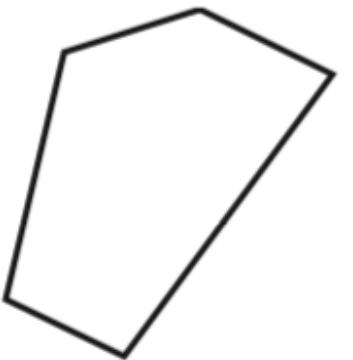
15.



No, has curves

2)

18.



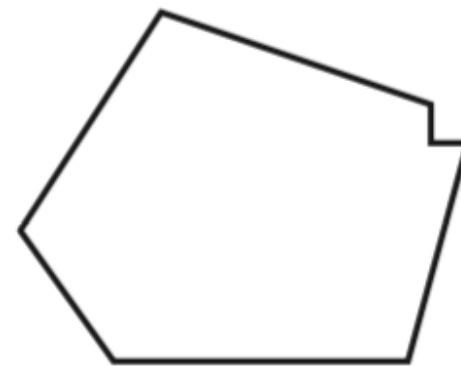
Convex, pentagon

19.



Concave, heptagon

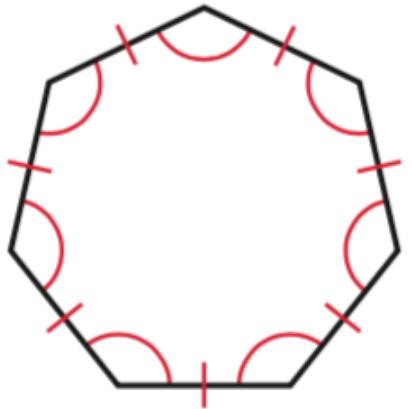
20.



Concave, heptagon

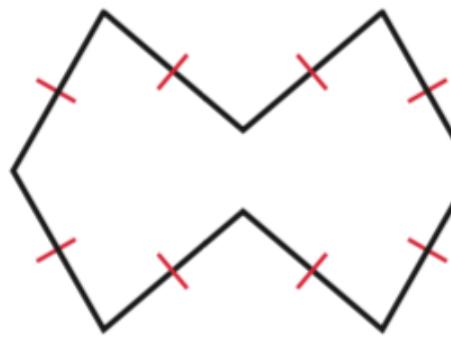
3)

24.



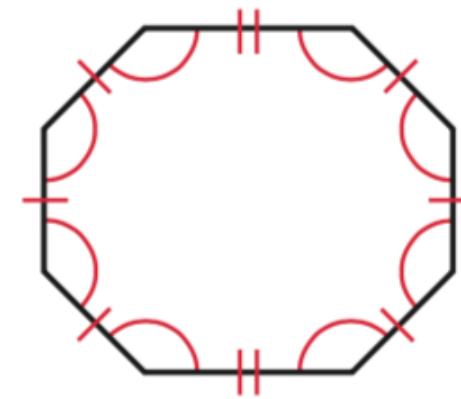
Regular

25.



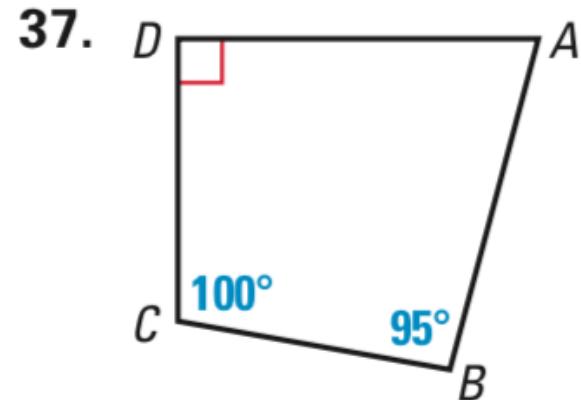
Equilateral

26.

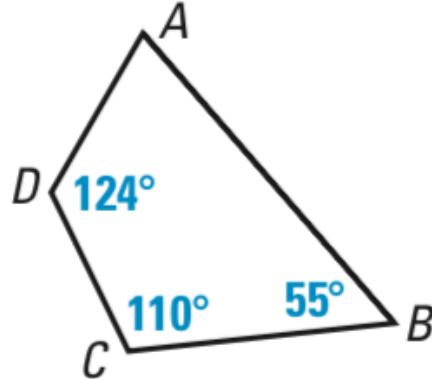


Equiangular

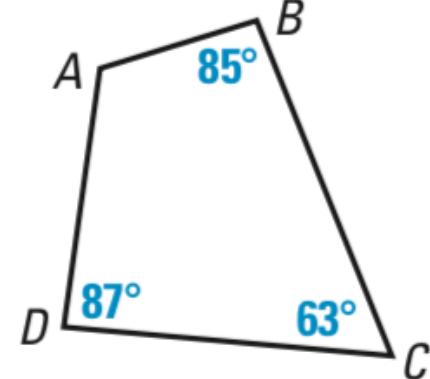
4)



38.



39.

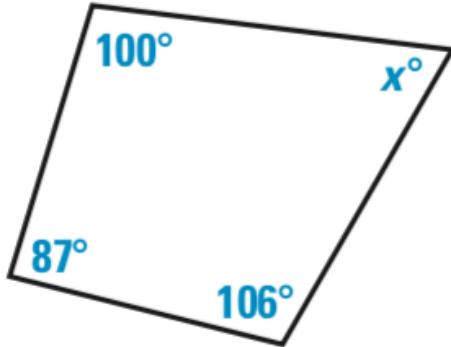


$$37 \rightarrow 360 - 90 - 100 - 95 = 75^*$$

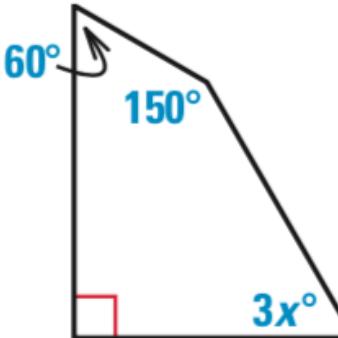
$$38 \rightarrow 360 - 124 - 110 - 55 = 71^*$$

$$39 \rightarrow 360 - 87 - 63 - 85 = 125^*$$

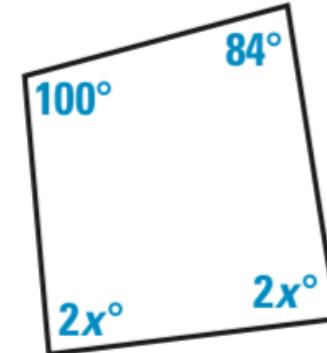
4) (cont'd) 41.



42.



43.



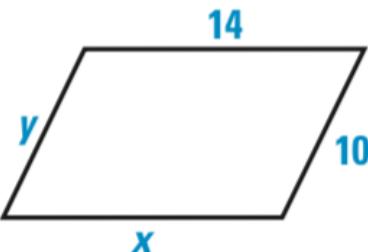
$$41 \rightarrow 100 + 87 + 106 + x = 360 \rightarrow 293 + x = 360 \rightarrow x = 67^*$$

$$42 \rightarrow 90 + 60 + 150 + 3x = 360 \rightarrow 300 + 3x = 360 \rightarrow 3x = 60 \rightarrow x = 20$$

$$43 \rightarrow 100 + 84 + 2x + 2x = 360 \rightarrow 184 + 4x = 360 \rightarrow 4x = 176 \rightarrow x = 44$$

5-7)

26.



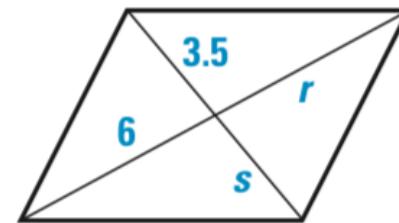
$$\begin{aligned}y &= 10 \\x &= 14\end{aligned}$$

27.



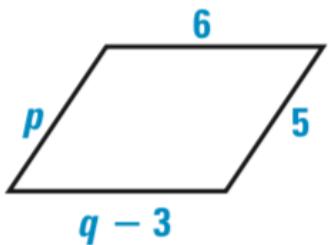
$$\begin{aligned}a &\rightarrow 180 - 101 = 79 \\b &= 101\end{aligned}$$

28.



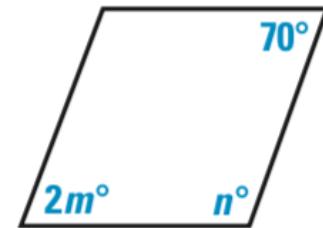
$$\begin{aligned}r &= 6 \\s &= 3.5\end{aligned}$$

29.



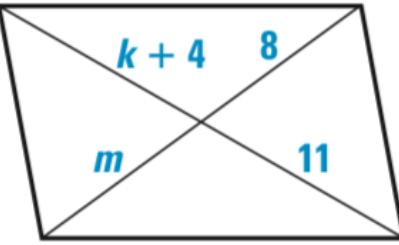
$$\begin{aligned}p &= 5 \\q - 3 &= 6 \rightarrow q = 9\end{aligned}$$

30.



$$\begin{aligned}n &\rightarrow 180 - 70 = 110 \\2m &= \frac{70}{2} \rightarrow m = 35\end{aligned}$$

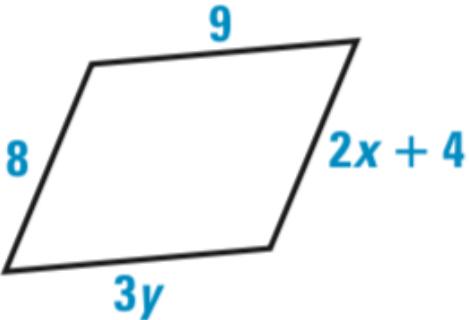
31.



$$\begin{aligned}m &= 8 \\k + 4 &= 11 \rightarrow k = 7\end{aligned}$$

8)

32.



$$\frac{3y}{3} = \frac{9}{3}$$

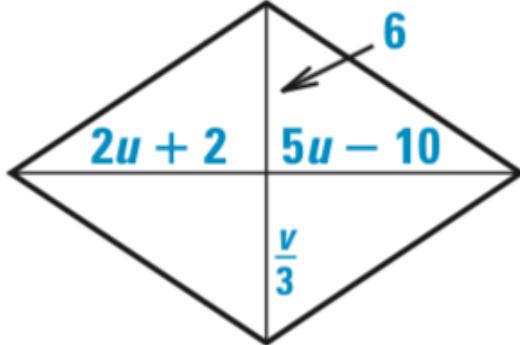
$$y = 3$$

$$\begin{array}{r} 2x + 4 \\ -1 \\ \hline 2x = 4 \end{array}$$

$$\frac{2x}{2} = \frac{4}{2}$$

$$x = 2$$

33.



$$\frac{3 \times \frac{v}{3}}{3} = 6$$

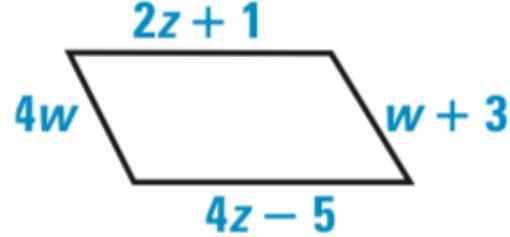
$$v = 18$$

$$\begin{array}{r} 2u + 2 = 5u - 10 \\ -2u + 10 \\ \hline -2u = -12 \end{array}$$

$$\frac{12}{3} = \frac{3u}{3}$$

$$4 = u$$

34.



$$\begin{array}{r} 2z + 1 = 4z - 5 \\ -2z + 5 \\ \hline -2z = -6 \end{array}$$

$$\frac{6}{2} = \frac{2z}{2}$$

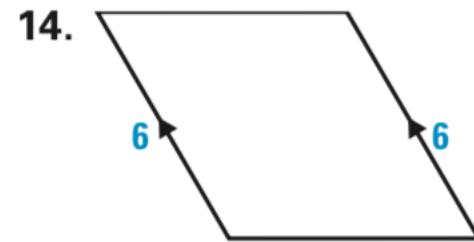
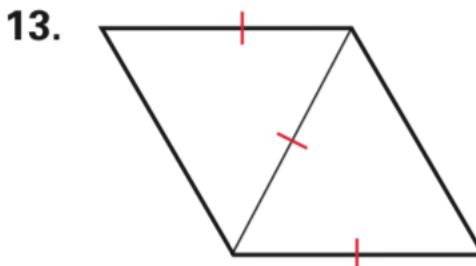
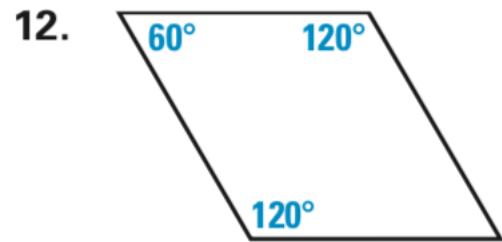
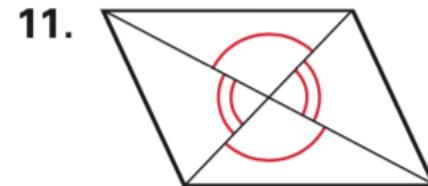
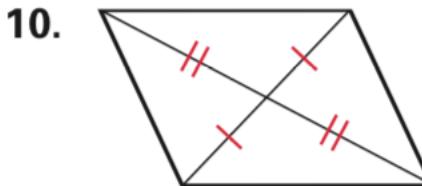
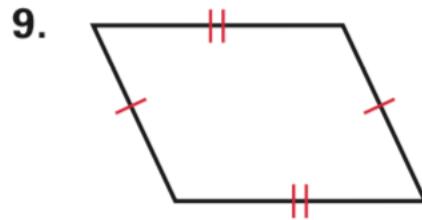
$$3 = z$$

$$\begin{array}{r} 4w = w + 3 \\ -w \\ \hline 3w = 3 \end{array}$$

$$\frac{3w}{3} = \frac{3}{3}$$

$$w = 1$$

9-11)



9 → yes, opposite sides congruent (6.6)

10 → yes, diagonals bisect (6.9)

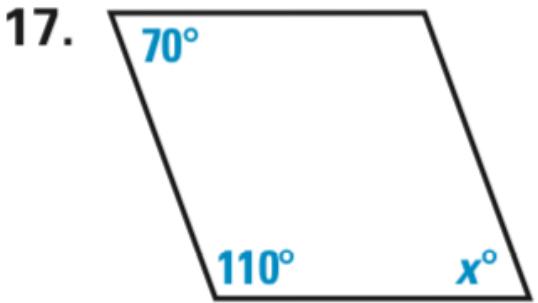
11 → no, not enough info.

12 → yes, one angle is supp. to both consecutive angles (6.8)

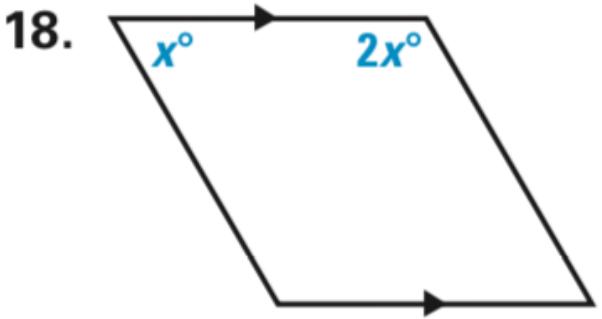
13 → no, not enough info.

14 → yes, one pair of sides are both congruent and parallel (6.10)

12)



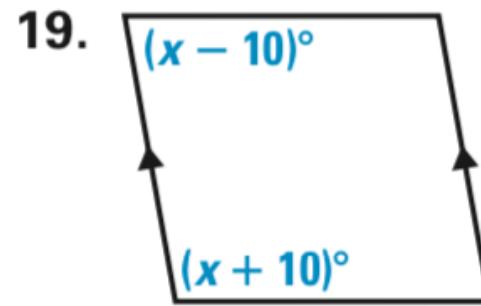
$$x = 70$$



$$x + 2x = 180$$

$$\frac{3x = 180}{3}$$

$$x = 60$$

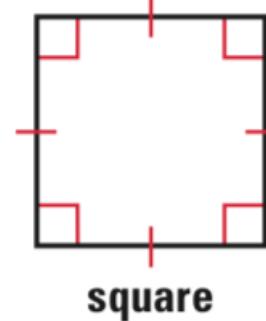
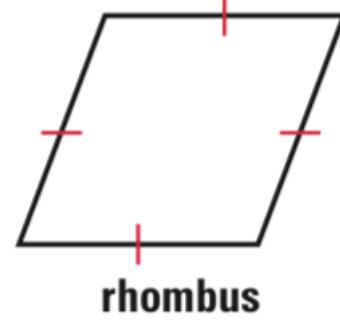
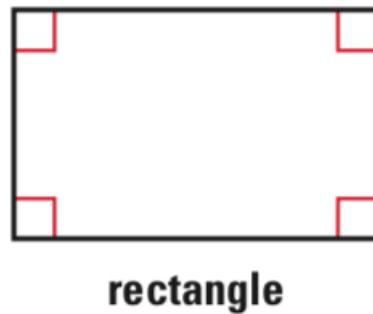
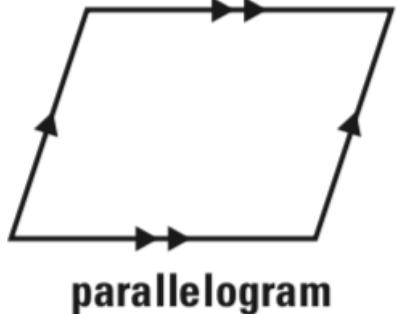


$$(x - 10) + (x + 10) = 180$$

$$\frac{2x = 180}{2}$$

$$x = 90$$

13)



16. It is equiangular.

Rectangle, square

17. It is equiangular and equilateral.

Square

18. The diagonals are perpendicular.

Rhombus, square

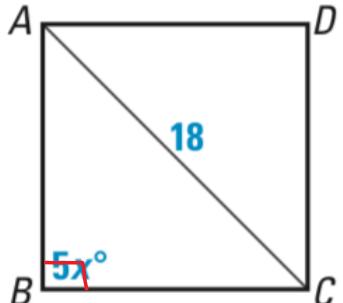
19. Opposite sides are congruent.

All 4

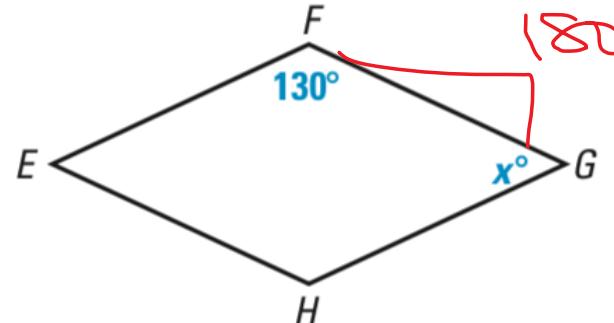
14-16)

33.  $ABCD$  is a square.

$$\cancel{5x = 90} \\ \cancel{5} \\ x = 18$$



34.  $EFGH$  is a rhombus.



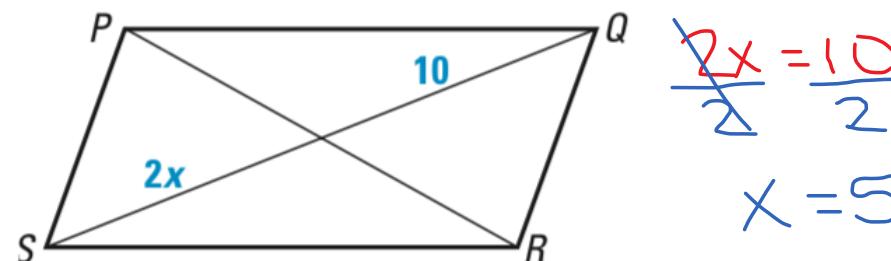
$$180 - 130 \\ x = 50$$

35.  $KLMN$  is a rectangle.

$$\cancel{x + 40 = 90} \\ \cancel{-40} \quad -40 \\ x = 50$$



36.  $PQRS$  is a parallelogram.

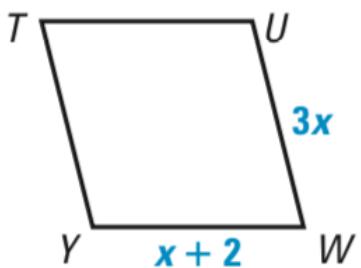


$$\cancel{2x = 10} \\ \cancel{2} \\ x = 5$$

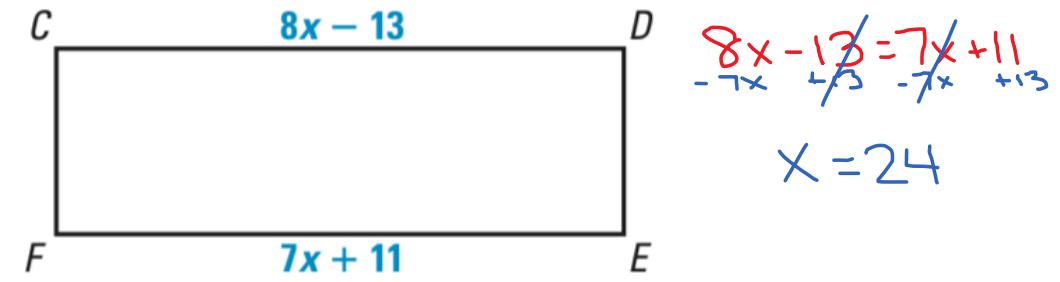
37.  $TUWY$  is a rhombus.

$$\cancel{3x = x + 2} \\ \cancel{-x} \\ 2x = 2$$

$$\frac{2}{2} \\ x = 1$$



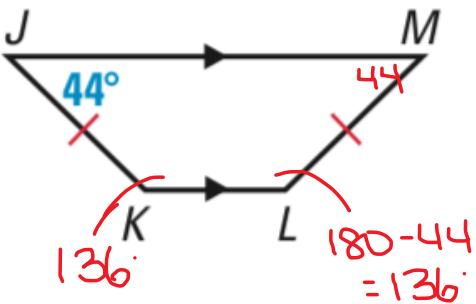
38.  $CDEF$  is a rectangle.



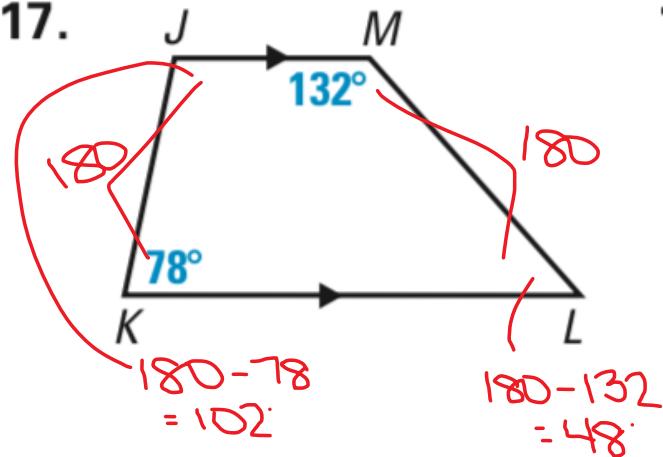
$$\cancel{8x - 13 = 7x + 11} \\ \cancel{-7x} \quad \cancel{+13} \\ x = 24$$

17)

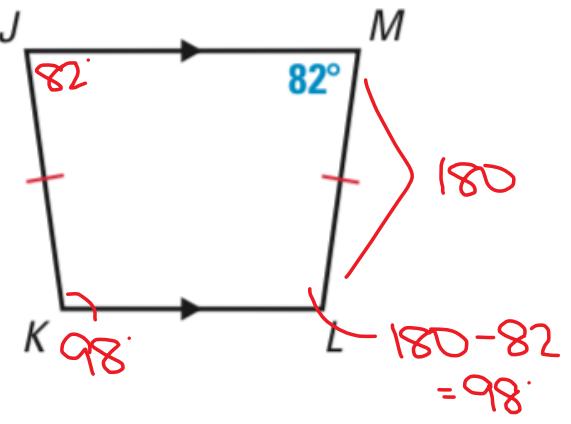
16.



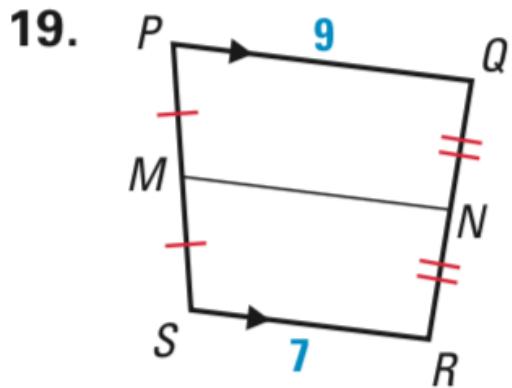
17.



18.



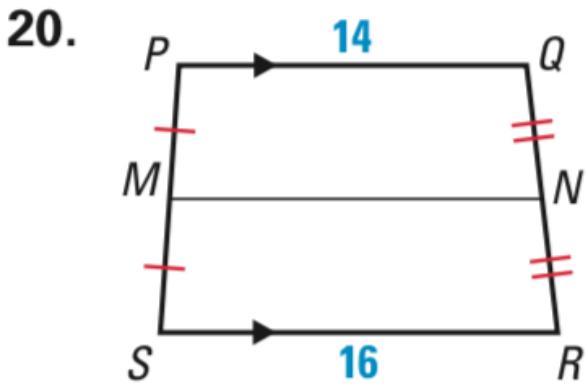
18)



$$\frac{1}{2}(7+9)$$

$$\frac{1}{2}(16)$$

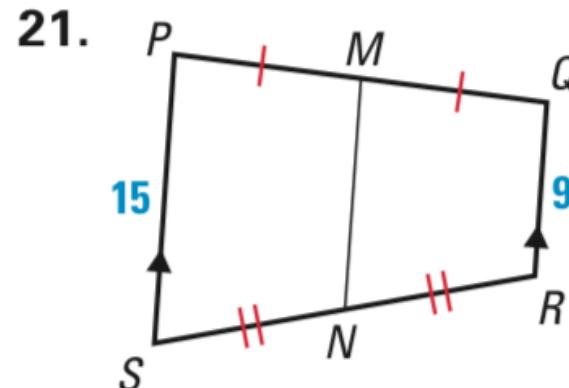
$$8$$



$$\frac{1}{2}(14+16)$$

$$\frac{1}{2}(30)$$

$$15$$



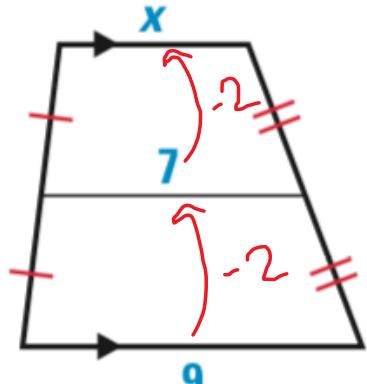
$$\frac{1}{2}(15+9)$$

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

$$12$$

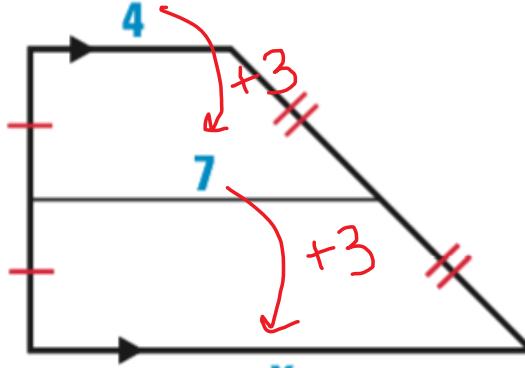
19)

22.



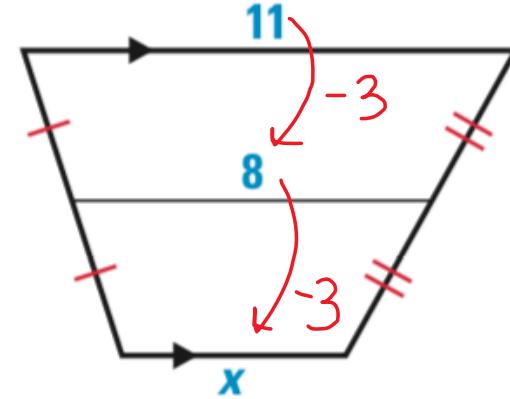
$$x = 5$$

23.



$$x = 10$$

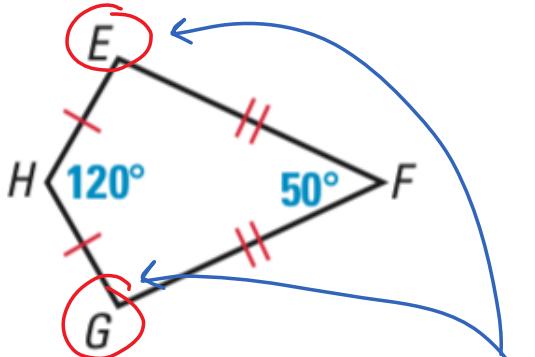
24.



$$x = 5$$

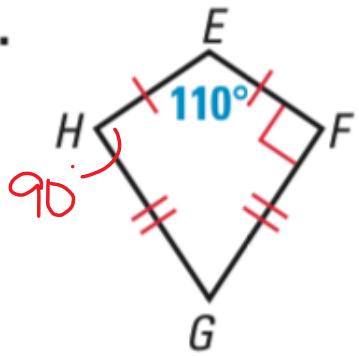
20)

31.



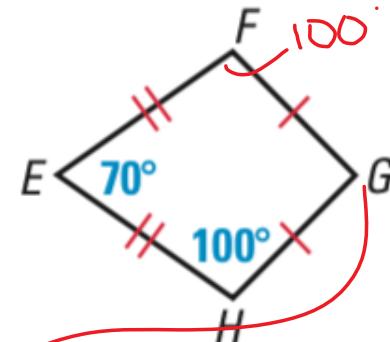
$$360 - 120 - 50 = \frac{190}{2} = 95^\circ$$

32.



$$360 - 90 - 110 - 90 = 70^\circ$$

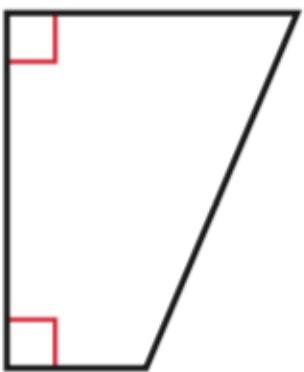
33.



$$360 - 100 - 70 - 100 - 90 = 0^\circ$$

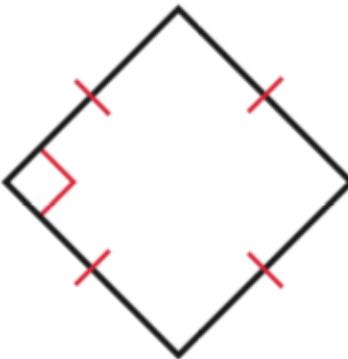
21)

16.



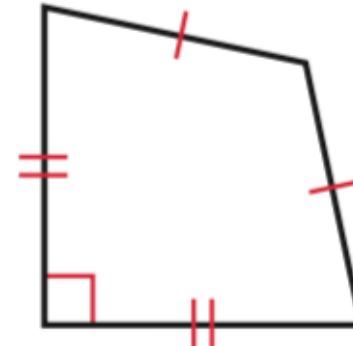
Trapezoid

17.



Square

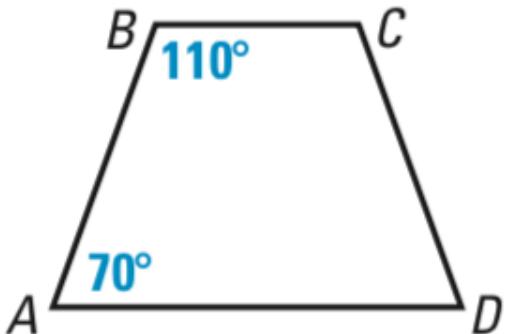
18.



Kite

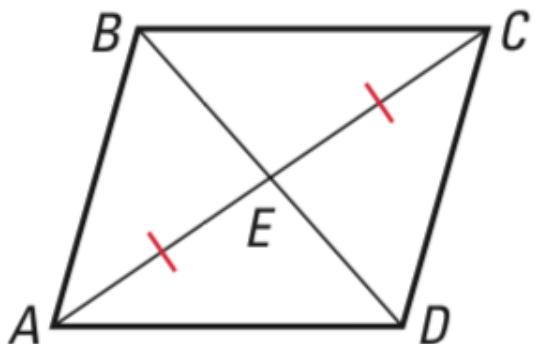
22)

30. isosceles trapezoid



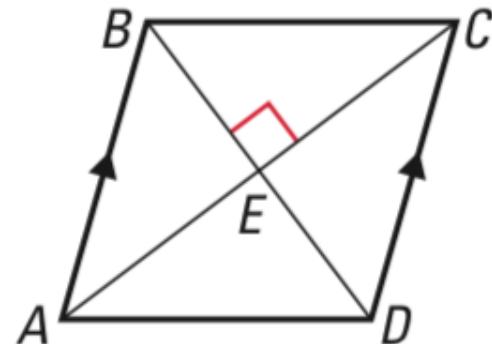
AB congruent CD  
 $\angle A$  congruent  $\angle D$   
 $\angle B$  congruent  $\angle C$

31. parallelogram



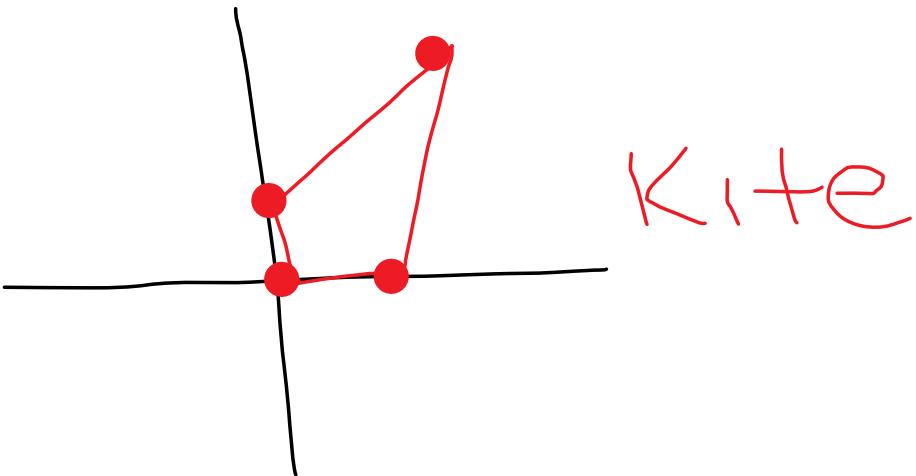
AB congruent DC  
AD congruent BC  
 $\angle A$  congruent  $\angle C$   
 $\angle B$  congruent  $\angle D$   
BE congruent DE

32. rhombus

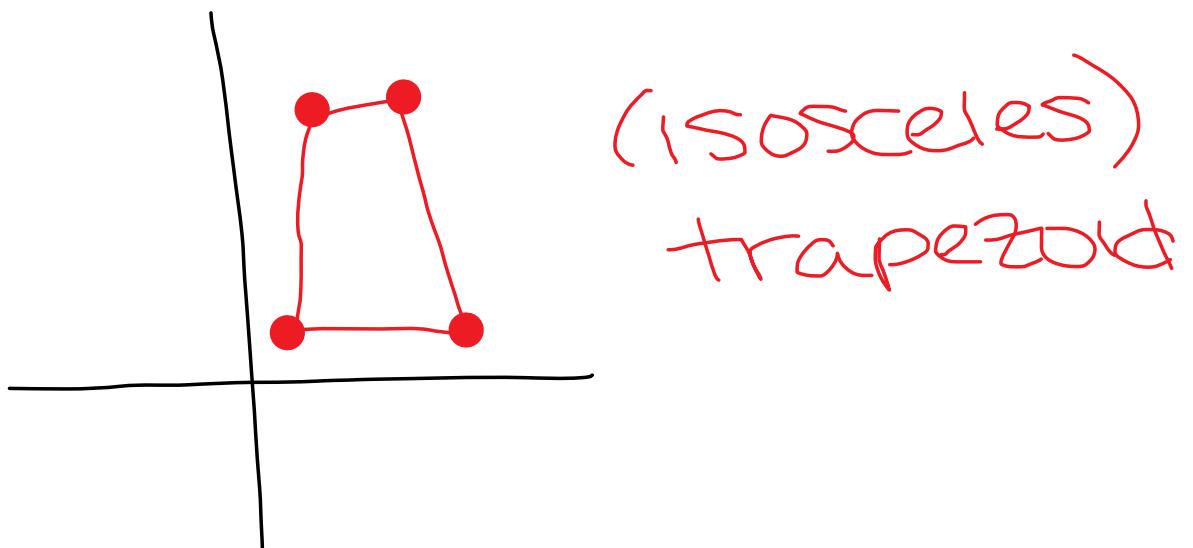


AB congruent BC  
congruent CD congruent DA

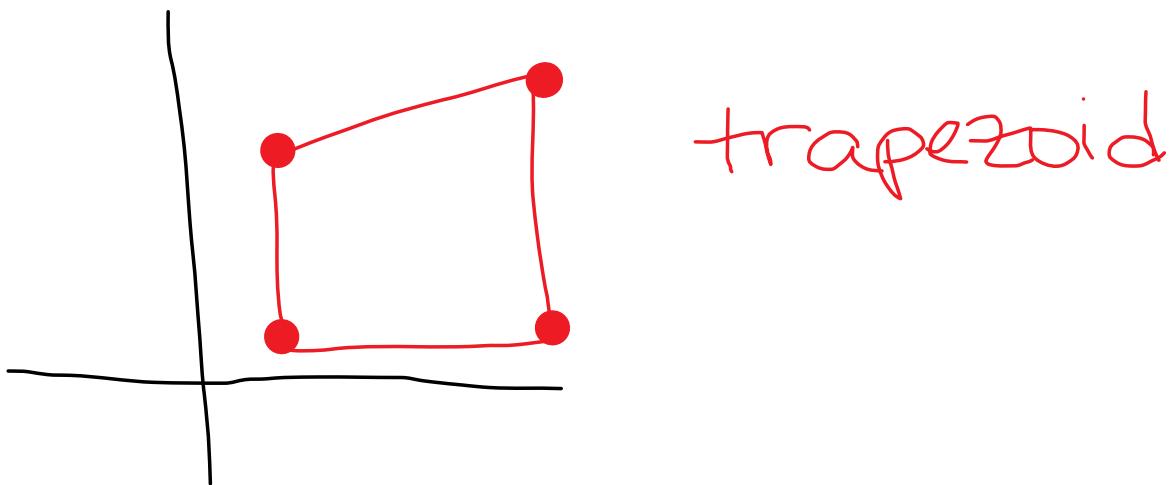
23) 36.  $P(0, 0), Q(0, 2), R(5, 5), S(2, 0)$



37.  $P(1, 1), Q(5, 1), R(4, 8), S(2, 8)$



38.  $P(2, 1), Q(7, 1), R(7, 7), S(2, 5)$



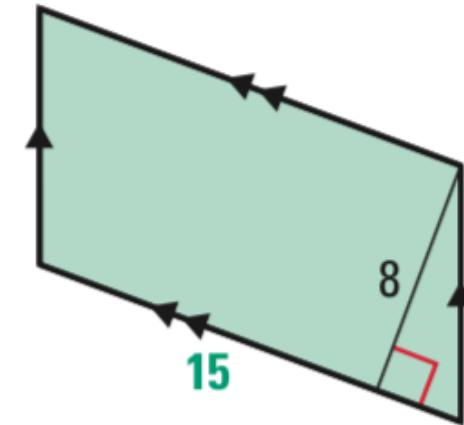
24)

$$9 \times 5 \\ 45 \text{ u}^2$$

16.



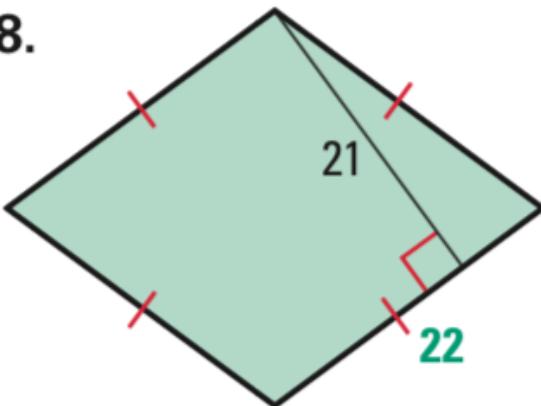
17.



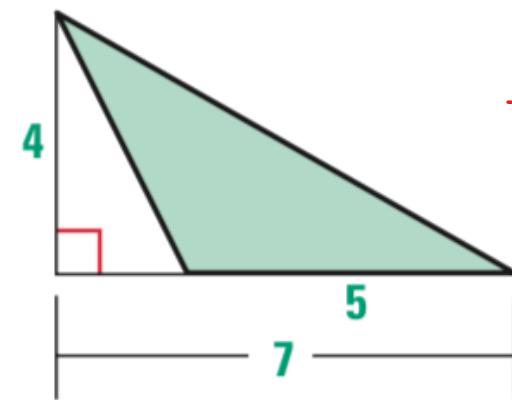
$$15 \times 8 \\ 120 \text{ u}^2$$

$$22 \times 21 \\ 462 \text{ u}^2$$

18.



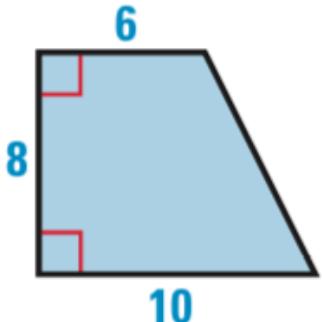
19.



$$\frac{1}{2} \times 4 \times 5 \\ 10 \text{ u}^2$$

25-27)

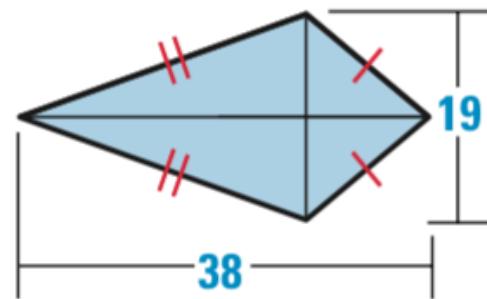
20.



$$\frac{1}{2}(8)(6+10)$$

$$64 \text{ u}^2$$

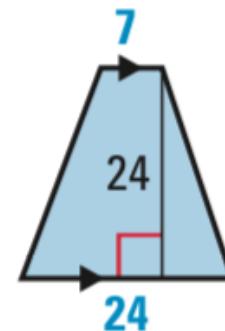
21.



$$\frac{1}{2}(38)(19)$$

$$361 \text{ u}^2$$

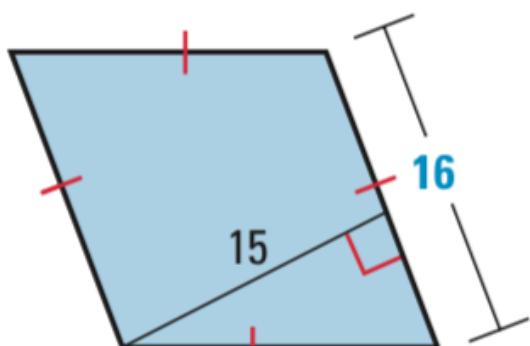
22.



$$\frac{1}{2}(24)(24+7)$$

$$372 \text{ u}^2$$

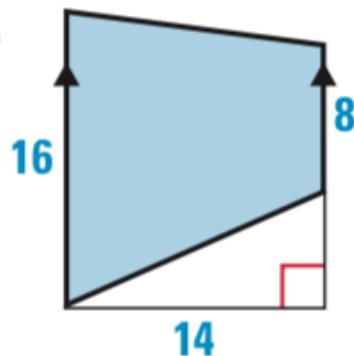
23.



$$15 \times 16$$

$$240 \text{ u}^2$$

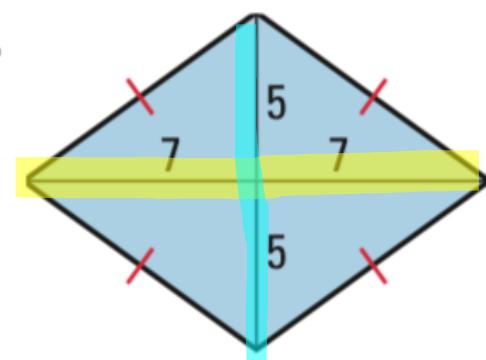
24.



$$\frac{1}{2}(14)(16+8)$$

$$168 \text{ u}^2$$

25.



$$\frac{1}{2}(14)(10)$$

$$70 \text{ u}^2$$