

STATION 1 Vocabulary.

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Fill in the blank with the appropriate vocabulary word

1. The segment that joins the midpoints of the legs of a trapezoid is called a _____.
2. The diagonals of a _____ bisect each other.
3. A quadrilateral with 4 congruent angles is a _____.
4. The parallel sides of a trapezoid are called _____.
5. The diagonals of a _____ are perpendicular.
6. A _____ is a rectangle and a rhombus.
7. A quadrilateral with 4 congruent sides is a _____.
8. A quadrilateral with 1 pair of parallel sides is a _____.
9. The non-parallel sides of a trapezoid are called _____.
10. A quadrilateral with congruent diagonals is a _____.
11. In a parallelogram, consecutive angles are _____.
12. A seven sided polygon _____.
13. A six sided polygon is a _____.
14. In quadrilateral WXYZ, segment \overline{XZ} is a _____.
15. A 5 sided polygon is called a _____.

← not sure?
draw it!

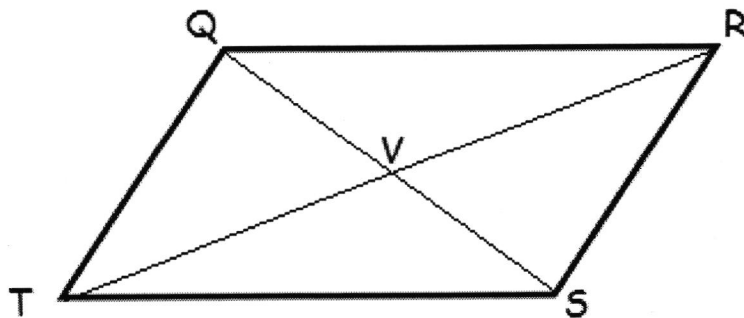
STATION 2

Quadrilaterals & Parallelograms

QRST is a parallelogram.

If $m\angle STQ = 83$, then...

16. $\angle TQR =$
17. $\angle QRS =$
18. $\angle RST =$



If segment $\overline{QT} = 7x - 4$, and segment $\overline{RS} = 5x + 2$...

19. $x = ?$
20. What is the length of \overline{QT} ?

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If segment \overline{TV} measures 14...

21. $\overline{RV} = ?$
22. $\overline{RT} = ?$

If ABCD is a quadrilateral,

23. What is segment \overline{AC} called?
24. If $m\angle A = 80$, $m\angle B = 72$, and $m\angle C = 105$, what is $m\angle D$?

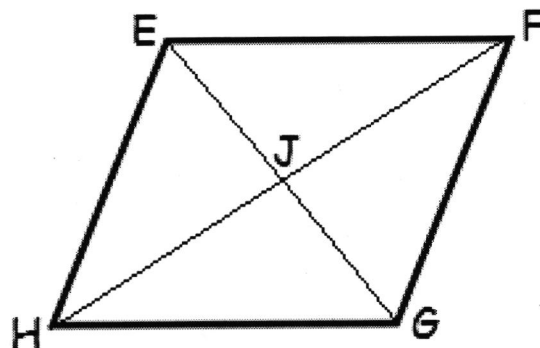
STATION 3

Rectangles and Rhombi and Squares

EFGH is a Rhombus.

If segment $\overline{FG} = 15$...

25. What is the perimeter of EFGH?



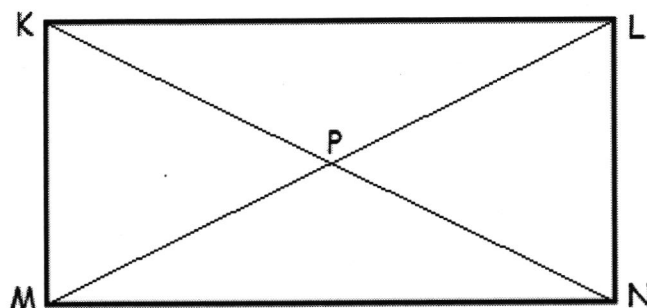
~~26. If $EJ = 5$, and $FJ = 12$, then what is the measure of EF?~~
Skip

KLMN is a rectangle.

If $\overline{KL} = 8x - 6$, and $\overline{MN} = 5x + 15$...

27. What is X?

28. What is the length of \overline{KL} ?



29. If $\angle KLN = 2y$, then $y = ?$

If $KN = 20$, then...

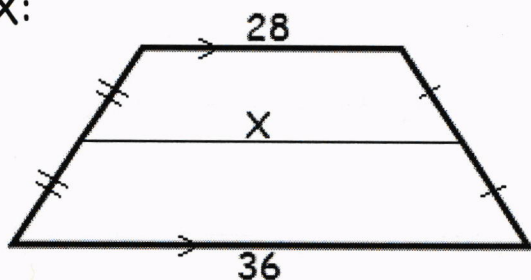
30. ~~KN~~ $\overline{ML} = ?$

31. $\overline{NP} = ?$

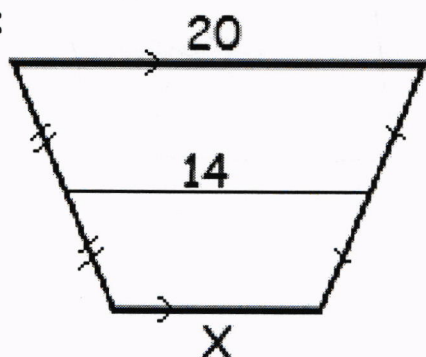
32. ABCD is a square. The measure of \overline{AB} is 10. The perimeter of ABCD is $5x$. What is X?

STATION 4 TRAPEZOIDS

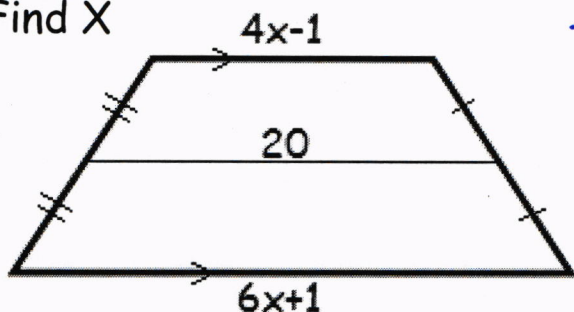
33. Find X:



34. Find X:

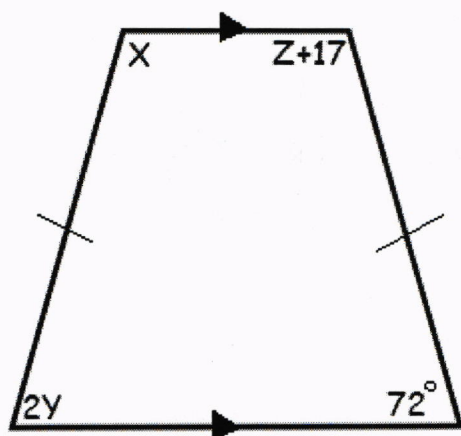


35. Find X



this is a hard problem

36. Find X



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STATION 5

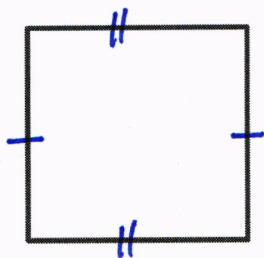
Polygons:

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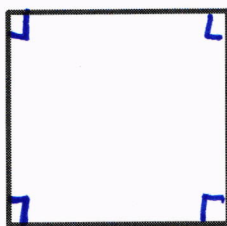
37. What is the sum of the interior angles of an octagon?
38. What is the sum of the exterior angles of a decagon?
39. What is the measure of each interior angle of a regular hexagon?
40. What is the measure of each exterior angle of a regular pentagon?

Identify the name of the quadrilateral shown:

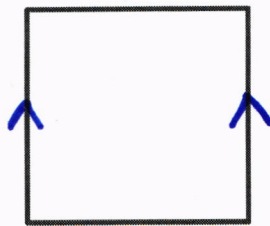
41.



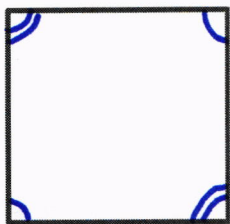
42.



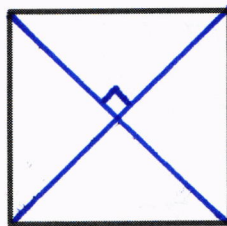
43.



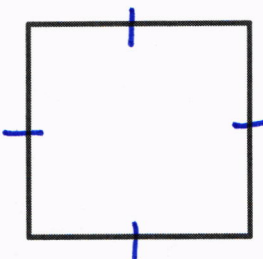
44.



45.



46.

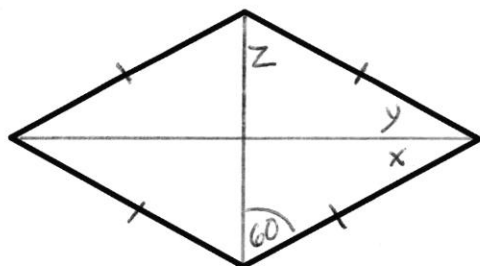


STATION 6

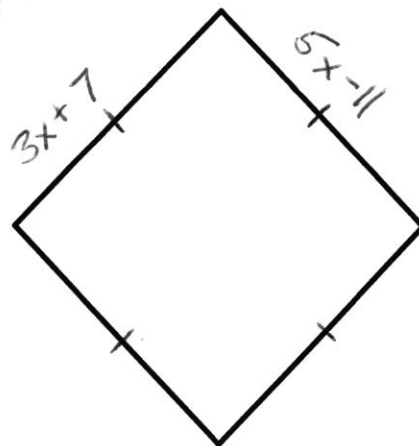
Polygons:

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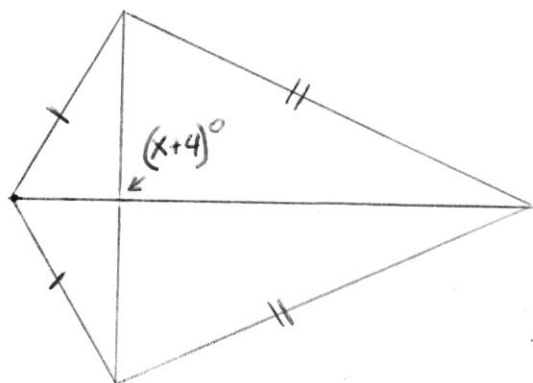
47. Rhombus



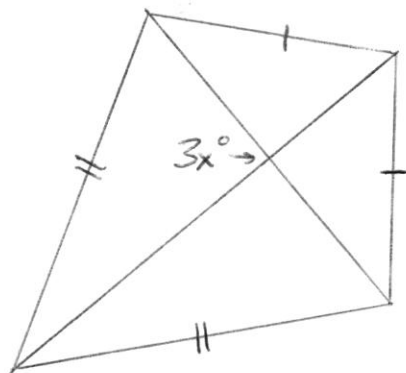
48. Rhombus



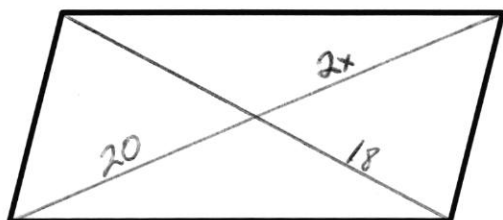
49. Kite



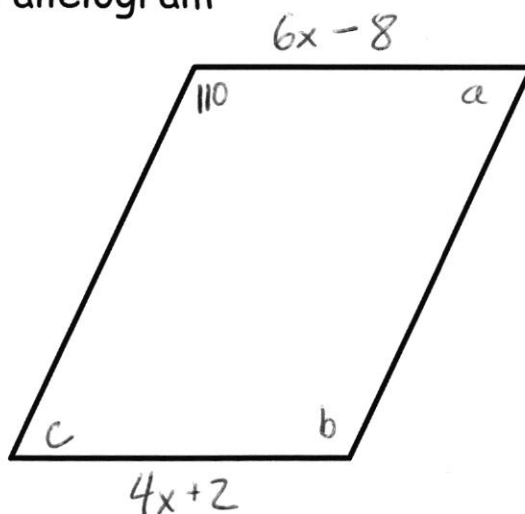
50. Kite



51. parallelogram



52. parallelogram

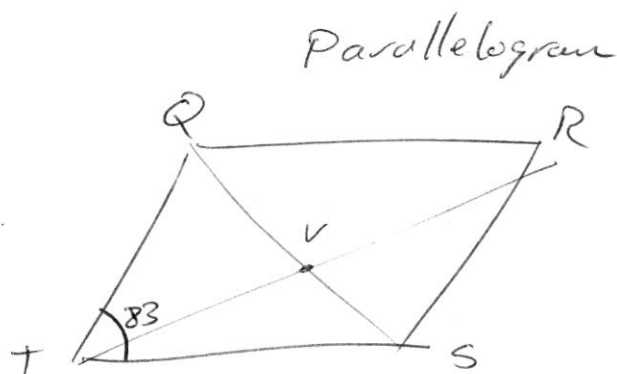


- 1 midsegment
- 2 parallelogram
- 3 rectangle
- 4 bases
- 5 rhombus or kite

- 6 square
- 7 Rhombus
- 8 trapezoid
- 9 Legs
- 10 rectangle

- 11 supplements
- 12 heptagon/septagon
- 13 hexagon
- 14 Diagonal
- 15 pentagon

16. $\angle TQR = 97^\circ$
 17. $\angle QRS = 83^\circ$
 18. $\angle RST = 97^\circ$



19. $QT = 7x - 4$, $RS = 5x + 2$

$$7x - 4 = 5x + 2$$

$$2x = 6$$

$$x = 3$$

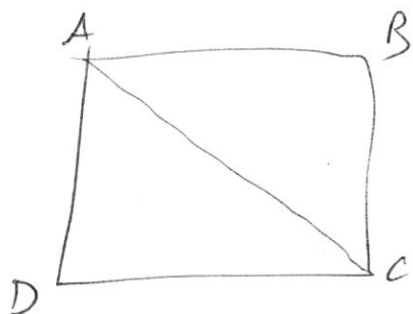
20. plug 3 in $7x - 4 \rightarrow 7 \cdot 3 - 4 = 17$

~~20~~

21 & 22. The diagonals cut each other in half

if $TV = 14 \rightarrow RV = 14 \rightarrow RT = 28$

23

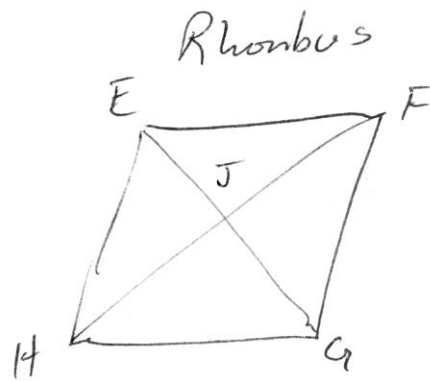


AC is a diagonal

24. $360 - 80 - 72 - 105 = 103$

(25) $15 \times 4 = 60$

(26) skip

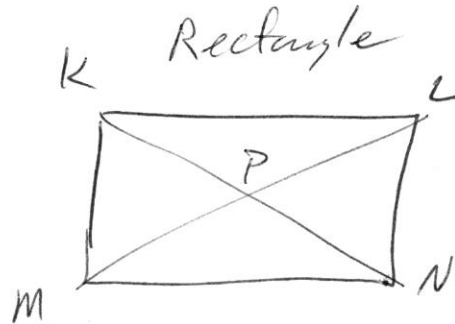


(27)

$$8x - 6 = 5x + 15$$

$$3x = 21$$

$$x = 7$$



(28) $8x - 6 \rightarrow 8 \cdot 7 - 6 \rightarrow 50$

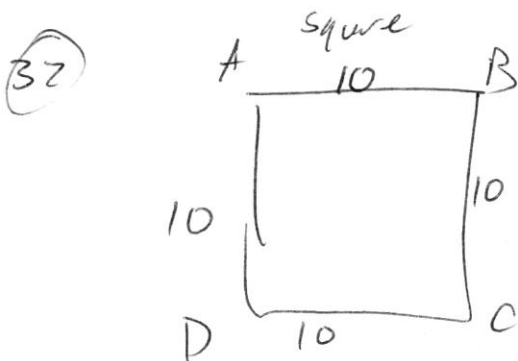
(29) $m\angle KLN = 2y = 90$

$$y = 45$$

(30 & 31)

$$KN = 20 \rightarrow ML = 20$$

$$NP = 10$$



perimeter = $5x = 40$

$$x = 8$$

33

$$\frac{28+36}{2} = 32$$

34

$$\frac{20+x}{2} = 14$$

$$20-6 = 14$$

OR $14-6 = \boxed{8}$

$$20+x = 28$$

$$x = \boxed{8}$$

35

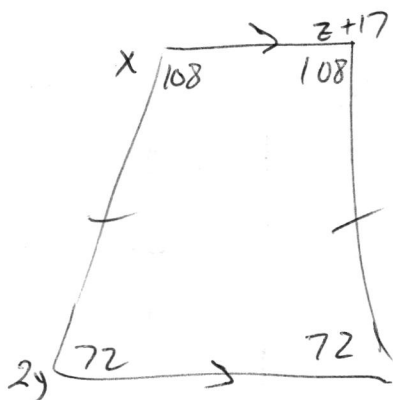
$$2 \cdot \frac{4x-1+6x+1}{2} = 20 \cdot 2$$

$$4x-1+6x+1 = 40$$

$$10x = 40$$

$$x = 4$$

36



$$\boxed{x = 108}$$

$$z+17=108$$

$$\boxed{z = 91}$$

$$2y = 72$$

$$\boxed{y = 36}$$

$$(37) (8-2) \cdot 180 = 1080$$

$$(38) 360$$

$$(39) (6-2) \cdot 180 = 720 \text{ ~~UNANA~~}$$

$$720 \div 6 = \boxed{120}$$

$$(40) 360 \div 5 = 72$$

41 parallelogram

42 rectangle

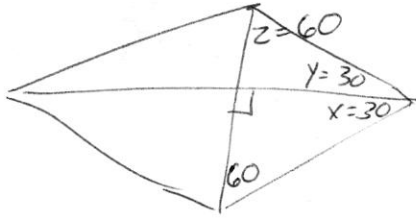
43 trapezoid

44 parallelogram

45 rhombus (or kite)

46 rhombus

(47)



(48)

$$3x+7=5x-11$$

$$18=2x$$

$$9=x$$

(49)

$$x+4=90$$

$$x=86$$

(50)

$$3x=90$$

$$x=30$$

(51)

$$2x=20$$

$$x=10$$

(52)

$$a=70$$

$$b=110$$

$$c=70$$

$$6x-8=4x+2$$

$$2x=10$$

$$x=5$$