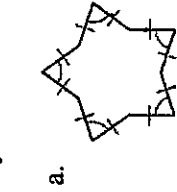


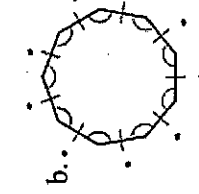
Chapter 6 Group Review – HOMEWORK – Due on Thurs. 2/25

1. Each of the parallel sides of a trapezoid is called a(n) base.

2. Tell whether the polygon is regular or not. Then, tell whether the polygon is concave or convex. Then, name the polygon by the number of its sides.



Not regular
concave
decagon

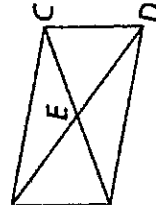


regular
concave
nonagon

3. Find the measure of each exterior angle of a regular polygon whose sum of the interior angles is 4680° .

$$180(n-2) = 4680 \rightarrow n = 28 \quad \frac{360}{28} = \text{ext. } \angle \approx 12.86^\circ$$

4. In $\parallel$ -gram ABCD, $m\angle ABC = 79^\circ$, $BC = 62.4$ and $BD = 75$. Find ...

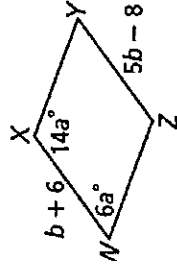


a. $AD = 62.4$

b. $m\angle CDA = 79^\circ$

c. $m\angle DAB = 101^\circ$

5. WXYZ is a $\parallel$ -gram. Find...



a. $YZ = 5b - 8$

$$14 = 4b$$

$$3.5 = b$$

$YZ = 9.5$

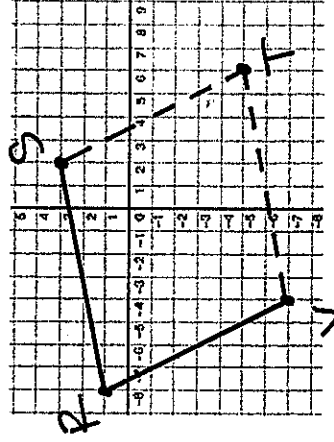
b. $m\angle X = 10a + 14a = 180$

$$20a = 180$$

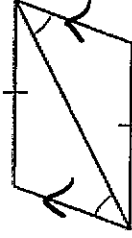
$$a = 9$$

$m\angle X = 126^\circ$

6. Three vertices of $\parallel$ -gram RSTV are $R(-8, 1)$, $S(2, 3)$, and $V(-4, -7)$. Find the coordinates of vertex T. (Remember, the order of the name RSTV matters!)



$T(0, -5)$



then
No, need more
info... only
one set of sides is $\parallel$,
other are $\cong$...

8. What are the values of x and y that make QRST a parallelogram?

$$5y - 10 = 2y + 11$$

$$3y = 21$$

$y = 7$

$$R \quad 5y - 10$$

$$(3x + 1)^\circ$$

$$Q \quad 2y + 11$$

$$(4x + 4)^\circ$$

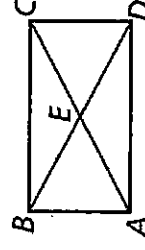
$$3x + 1 + 4x + 4 = 180$$

$$7x + 5 = 180$$

$7x = 175$

$x = 25$

9. In rectangle ABCD, $CD = 18$ and $CE = 19.8$. Find...



a. $AB = 18$

b. $BD = 2(19.8) = 39.6$

c. BC $BC^2 + AB^2 = AC^2$

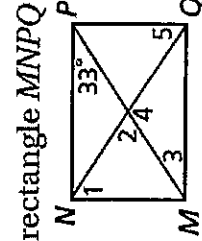
$$x^2 + 18^2 = 39.6^2$$

$$x^2 = 1244.16$$

$$x \approx 35.27$$

$BC \approx 35.27$

10. Find the measures of the numbered angles.



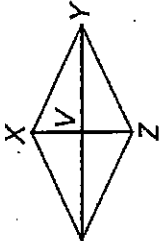
$m\angle 1 = 57^\circ$

$m\angle 3 = 33^\circ$

$m\angle 4 = 114^\circ$

$m\angle 5 = 57^\circ$

11. In rhombus WXYZ, $WX = (7a + 1)$, $WZ = (9a - 6)$, and $VZ = (3a)$. Find...



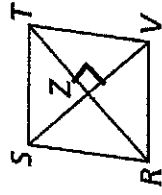
a. $WZ = 9a - 6$
 $2a = 7$
 $a = 3.5$
 $WZ = 25.5$

b. XY

$XY = 25.5$

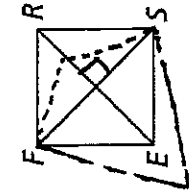
c. $XZ = 2(VZ) = 2(3(3.5))$
 $= 2(10.5)$
 $= 21$

12. In rhombus RSTV, $m\angle Tzv = (8n + 18)^\circ$, and $m\angle SRV = (9n + 1)^\circ$. Find...

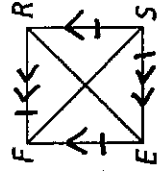


a. $m\angle STV$
 $8n + 18 = 90$
 $8n = 72$
 $n = 9$
 $m\angle SRV = 82^\circ$
 $m\angle TRS = \frac{m\angle SRV}{2} = \frac{82}{2} = 41^\circ$

13. Using the given information, decide whether the quadrilateral is a parallelogram, rhombus, rectangle, square, trapezoid, kite, or just a quadrilateral. NAME ALL THE APPLY!!! (i.e. a rectangle is also a parallelogram!) Justify your answer.



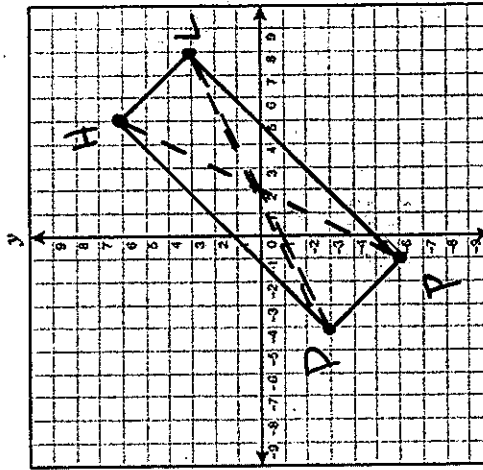
$\overline{ER} \perp \overline{FS}$, $\overline{ER} \cong \overline{FS}$
kite



b. $\overline{EF} \parallel \overline{RS}$, $\overline{FR} \parallel \overline{ES}$, $\overline{EF} \cong \overline{ES}$
ll-gram
rhombus

14. Use the diagonals to tell whether the ll-gram is a rectangle, rhombus, or square. Give all names that apply. (remember, if it is NOT a shape, you have to show that it isn't!)

D(-4, -3), H(5, 6), L(8, 3), P(-1, -6)

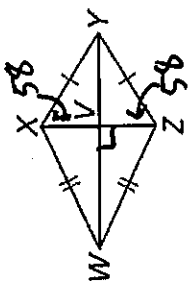


rhombus?
 $\overline{DL} \perp \overline{PH}$?
 $m\overline{DL} = \frac{1}{2}$
 $m\overline{PH} = 2$
 $(\frac{1}{2})(2) \neq -1$

SO, diags are not $\perp$, so DHP L is not a rhombus, so, rectangle.

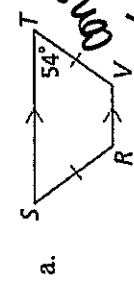
rectangle?
 $DL = PH$?
 $DL^2 = 6^2 + 12^2$
 $DL = 6\sqrt{5}$
 $PH^2 = 6^2 + 12^2$
 $PH = 6\sqrt{5}$
Since diags =, DHP L is then diags $\cong$ a rect!!

15. In kite WXYZ, $m\angle VXY = 58^\circ$, and $m\angle ZWX = 50^\circ$. Find... (Will cover with Thursday's Lesson Objective, but try to figure it out on your own! Use what you know about isosceles triangles!)



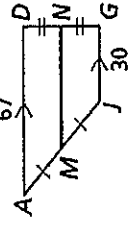
a. $m\angle XYZ$
 $X + 58 + 58 = 180$
 $X = 64$
 $m\angle XYZ = 64^\circ$

16. Find each measure. (Will cover with Thursday's lesson objective)



base $\angle$'s $\cong$
consec. $\angle$'s in isosc.
 $\downarrow$ trap.

$m\angle R = 126^\circ$
 $m\angle S = 54^\circ$



$\frac{67 + 30}{2} = MN$

17. Find the value of n so that PQXY is isosceles. (Will cover with Thursday's lesson objective)



$6n^2 + 7 = 8n^2 - 11$
 $2n^2 = 18$
 $n^2 = 9 \rightarrow n = \pm 3$