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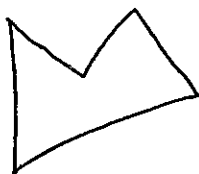
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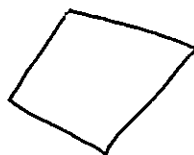
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HW #7-4: Quiz Review

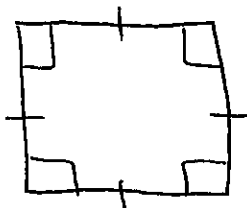
1. Draw an example of a concave polygon.



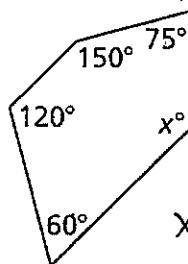
2. Draw an example of a convex polygon.



3. Draw an example of a regular polygon.



4. Find the value of x.



*pentagon

$$(180)(n-2) \\ (180)(5-2) = 540$$

$$x + 120 + 60 + 150 + 75 = 540$$

$$x = 135$$

5. Find the measure of each interior and exterior angle of a regular 15-gon.

$$\text{interior: } \frac{180(15-2)}{15} = \frac{(180)(13)}{15}$$

$$= 156^\circ$$

$$\text{exterior: } \frac{360}{15} = 24^\circ$$

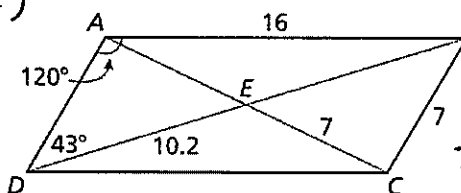
6. Find the indicated measure in ||-gram ABCD.

a. $CD = 16$ (opp. sides $\cong$)

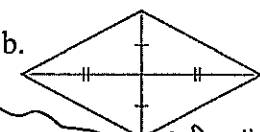
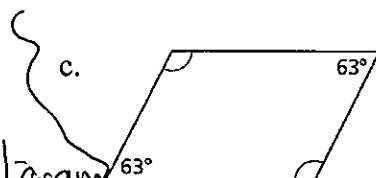
b. $BD = 20.4$ (E is mdpt of BD)

c. $m\angle ABC = 60^\circ$

d. $m\angle DBC = 43^\circ$

* $\angle ABC$ is consec. int. w/ $\angle DAB$ * $\angle DBC$ is alt. int. w/ $\angle ADB$

7. State the theorem (or describe it in "if
- $\rightarrow$
- then" form) that you can use to prove the quadrilateral is a ||-gram, if possible.

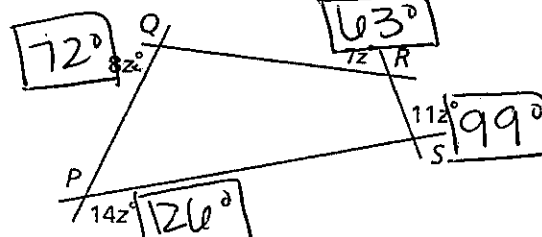
if 1 pair of opp. sides $\cong$ and $\parallel \rightarrow$ ||-gramif diags bisect each other $\rightarrow$ ||-gramif opp. $\angle$ s $\cong \rightarrow$ ||-gram

8. A park in the shape of quadrilateral PQRS is bordered by 4 sidewalks. Find the measure of each exterior angle of the park.

$$8z + 7z + 11z + 14z = 360$$

$$40z = 360$$

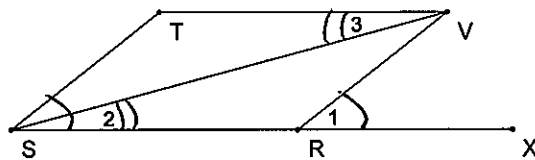
$$z = 9$$



9. Complete the proof:

Given: $\angle 1 \cong \angle RST$ and $\angle 2 \cong \angle 3$

Prove: RSTV is a parallelogram.



Statements	Reasons
① $\angle 1 \cong \angle RST, \angle 2 \cong \angle 3$	① given
② $\overline{VT} \parallel \overline{SR}$	② if alt. int. $\angle s \cong \rightarrow \parallel$
③ $\overline{TS} \parallel \overline{VR}$	③ if corresp. $\angle s \cong \rightarrow \parallel$
④ RSTV is a $\parallel$ -gram	④ if opp. sides $\parallel \rightarrow \parallel$ -gram

10. A convex polygon's interior angles have a sum of 2520° . How many sides does the polygon have? Then name the polygon by the number of its sides.

$$\begin{aligned}
 5a - 39 + 3a + 27 &= 180 \\
 8a - 12 &= 180 \\
 8a &= 192 \\
 a &= 24
 \end{aligned}$$

$$\begin{aligned}
 (n-2)(180) &= 2520 \\
 n-2 &= 14 \\
 n &= 16
 \end{aligned}$$

* 16-sided polygon
16-gon

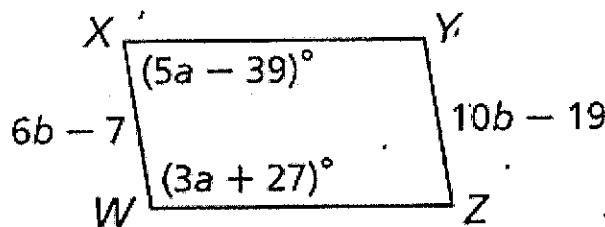
11. WXYZ is a parallelogram. Find each measure.

a. $WX = \underline{11}$

b. $YZ = \underline{11}$

c. $m\angle X = \underline{81^\circ}$

d. $m\angle W = \underline{99^\circ}$

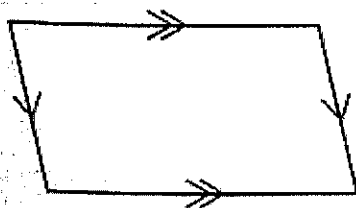


$$\begin{aligned}
 6b - 7 &= 10b - 19 \\
 12 &= 4b \\
 3 &= b
 \end{aligned}$$

$$\begin{aligned}
 WX &= 6(3) - 7 \\
 WX &= 11
 \end{aligned}$$

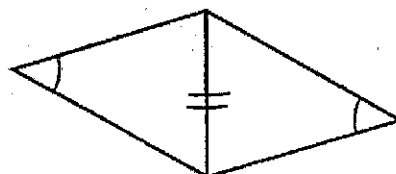
12. Determine if each quadrilateral must be a parallelogram. Justify your answer.

a.



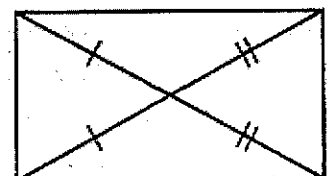
Yes, opp. sides $\parallel$

b.



NO

c.



NO