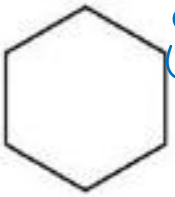
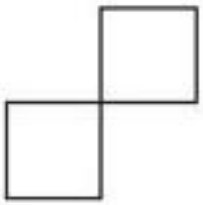
PRACTICE AND PROBLEM SOLVING

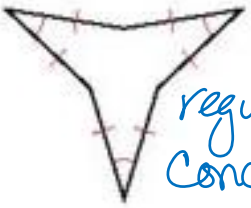
Tell whether each figure is a polygon. If it is a polygon, name it by the number of its sides.

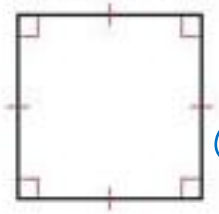
16.  yes, hexagon

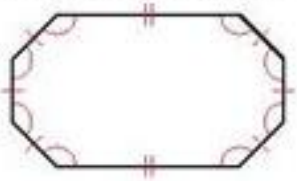
17.  no

18.  yes quadrilateral

Tell whether each polygon is regular or irregular. Tell whether it is concave or convex.

19.  regular Concave

20.  regular Convex

21.  irregular Convex

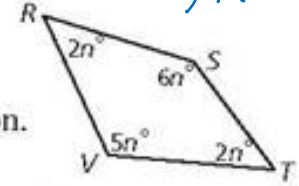
$2n+6n+5n+2n=360$

$15n=360$

$n=24$

22. Find the measure of each interior angle of quadrilateral *RSTV*.

$m\angle R=48°$, $m\angle S=144°$, $m\angle T=48°$, $m\angle V=120°$



23. Find the measure of each interior angle of a regular 18-gon.

24. Find the sum of the interior angle measures of a convex heptagon.

25. Find the measure of each exterior angle of a regular nonagon.

26. A pentagon has exterior angle measures of $5a°$, $4a°$, $10a°$, $3a°$, and $8a°$. Find the value of a.

23) $\frac{(18-2)180}{18}$ $\frac{2880°}{18}=160°$

24) $(7-2)180$ $900°$

25) $\frac{360}{a}=40°$

26) $5a+4a+10a+3a+8a=360$

$30a=360$

$a=12$

Name the convex polygon whose interior angle measures have each given sum.

35. 540°

36. 900° $900=180(n-2)$ $5=n-2$ $n=7$ heptagon

37. 1800°

38. 2520°

Multi-Step An exterior angle measure of a regular polygon is given. Find the number of its sides and the measure of each interior angle.

39. 120°

40. 72° $\frac{360}{72}=5$ sides $180-72$ $108°$

41. 36°

42. 24°