

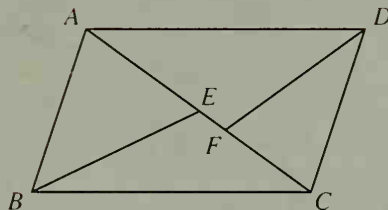
Given: $ABCD$ is a parallelogram;

$$\overline{AD} \cong \overline{AC}; \overline{AE} \cong \overline{EC}$$

$$\angle ADF \cong \angle CDF; m\angle DAC = 36$$

Complete each statement about the diagram.

18. $\overline{AE} \cong \overline{EC}$, so \overline{BE} is a(n) of $\triangle ABC$.
19. $\angle ADF \cong \angle CDF$, so \overline{DF} is a(n) of $\angle ADC$.
20. $\triangle ADC$ is a(n) triangle.
21. $m\angle DAC = 36$, so $m\angle ADC = \underline{\hspace{1cm}}$ and $m\angle ADF = \underline{\hspace{1cm}}$.
22. $\triangle ADF$ is a(n) triangle.
23. $\angle ADC \cong \angle \underline{\hspace{1cm}} \cong \angle \underline{\hspace{1cm}} \cong \angle \underline{\hspace{1cm}} \cong \angle \underline{\hspace{1cm}}$.



In the diagram, $m\angle VOZ = 90$.

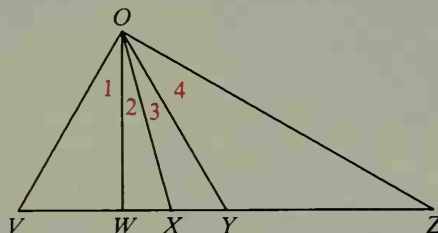
\overline{OW} is an altitude of $\triangle VOZ$.

\overline{OX} bisects $\angle VOZ$.

\overline{OY} is a median of $\triangle VOZ$.

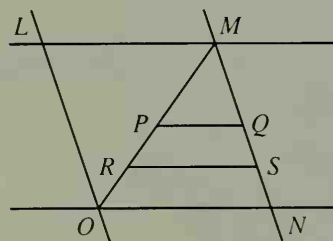
Find the measures of the four numbered angles.

24. $m\angle Z = 30$
25. $m\angle Z = k$

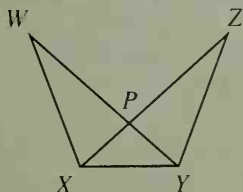


In Exercises 26–29, complete each statement about the diagram. Then state the definition, postulate, or theorem that justifies your answer.

26. If $LM = ON$ and $LO = MN$, then $LMNO$ is a .
27. If $LMNO$ is a rhombus, then $\angle LOM \cong \underline{\hspace{1cm}} \cong \underline{\hspace{1cm}} \cong \underline{\hspace{1cm}}$.
28. If $MP = PO$ and $\overline{PQ} \parallel \overline{ON}$, then Q is the of .
29. If $\overline{PQ} \parallel \overline{ON}$, $PR = RO$ and $QS = SN$, then $RS = \frac{1}{2}(\underline{\hspace{1cm}} + \underline{\hspace{1cm}})$.



30. Given: $WP = ZP$; $PY = PX$
Prove: $\angle WXY \cong \angle ZYX$



31. Given: $\overline{AD} \cong \overline{BC}$; $\overline{AD} \parallel \overline{BC}$
Prove: $\overline{EF} \cong \overline{FG}$

