

Practice 20

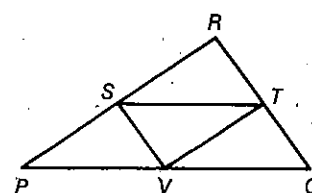
Chapter 5 Practice

Classify each statement as true or false.

- The diagonals of a parallelogram must bisect each other. true
- The diagonals of a rhombus must be congruent. false
- Consecutive sides of a parallelogram must be congruent. false
- A square is both a rhombus and a rectangle. true
- The diagonals of a rectangle must be perpendicular. false

S, T, and V are the midpoints of \overline{RP} , \overline{RQ} , and \overline{PQ} . Complete the following.

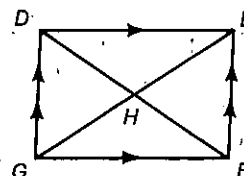
- $m\angle RTS = m\angle$ Q
- $SV = \frac{1}{2}$ RQ
- If $TV = 3\frac{3}{4}$, $RP =$ 7.5
- If $PQ = 7.4$, $ST =$ 3.7
- The best name for $PSTQ$ is Trapezoid



Exs. 6-10

DEFG is a parallelogram. Complete each statement.

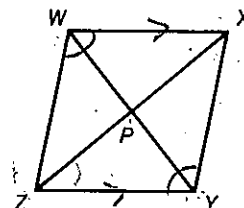
- If $DE = 27$ and $GF = 5x - 3$, then $x =$ 6
- If $DH = 4x - 3$ and $HF = 8x - 15$, then $x =$ 3 and $DF =$ 18
- If $m\angle GDE = 92$, then $m\angle GFE =$ 92 and $m\angle DEF =$ 88
- If $\overline{DG} \perp \overline{GF}$, then DEFG is a rectangle



Exs. 11-14

What additional information is needed to prove that quadrilateral WXYZ is a parallelogram?

- $\angle XWZ \cong \angle XYZ$ $\angle WXY \cong \angle WZY$
- $\overline{WZ} \parallel \overline{XY}$ $\overline{WX} \parallel \overline{ZY}$ or $\overline{WZ} \cong \overline{XY}$
- $\overline{WX} \cong \overline{ZY}$ $\overline{WX} \parallel \overline{ZY}$ or $\overline{WZ} \cong \overline{XY}$
- $\overline{WP} \cong \overline{PY}$ $\overline{ZP} \cong \overline{PX}$



Exs. 15-19

19. Given: Quad. WXYZ; $\overline{WX} \parallel \overline{ZY}$; $\angle XWZ \cong \angle XYZ$
Prove: WXYZ is a \square .

- $\overline{WX} \parallel \overline{ZY}$; $\angle XWZ \cong \angle XYZ$
- $\angle WZY$ is supp. to $\angle XYZ$; $\angle WXY$ is supp. to $\angle XYZ$
- $\angle WZY \cong \angle WXY$
- $\square WXYZ$

- Given
- \parallel lines \rightarrow \angle s supp.
- 2 \angle s supp. to $\cong \angle$ s $\rightarrow \cong$
- quad. w/ both pairs opp. \angle s $\cong \rightarrow \square$

OR

- $\angle WXZ \cong \angle YZX$ - alt. int. \angle s
- $\angle ZX \cong \angle ZX$ - reflex
- $\triangle ZYX \cong \triangle XWZ$ - AAS
- $\overline{ZY} \cong \overline{XW}$ - CPCTC
- $\square WXYZ$ - 1 pair sides $\cong + \parallel$