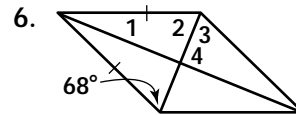
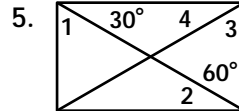
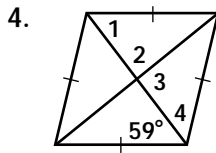
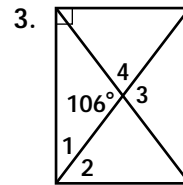
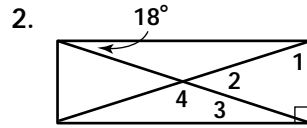
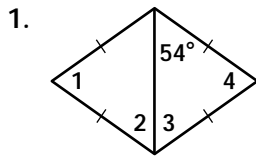


# Practice 9-3

## Mixed Exercises

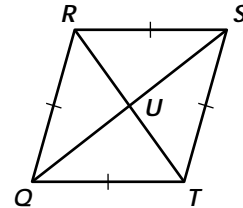
For each parallelogram (a) choose the best name and then (b) find the measures of the numbered angles.



7. Complete the following two-column proof of Theorem 9-10:  
The diagonals of a rhombus are perpendicular.

Given:  $QRST$  is a rhombus.

Prove:  $\overline{QS} \perp \overline{RT}$



Statements	Reasons
1. $\overline{QR} \cong \overline{QT}$	a.
b. $\overline{QS}$ bisects $\square$ .	2. Theorem 9-9 (Each diagonal of a rhombus bisects 2 angles of the rhombus.)
3. $\angle RQU \cong \angle TQU$	c.
4. $\overline{QU} \cong \overline{QU}$	d.
e. $\triangle RQU \cong \triangle TQU$	5. SAS Postulate
6. $\angle QUR \cong \angle QUT$	f.
7. $m\angle QUR + m\angle QUT = 180$	g.
h. $m\angle QUR + \square = 180$	8. Substitution
9. $2m\angle QUR = 180$	i.
10. $\angle QUR$ is a right angle.	j.
11. $\angle QUT$ is a right angle.	k.
12. $\overline{QS} \perp \overline{RT}$	l.

For each rhombus (a) find the measures of the numbered angles and then (b) find the area.

