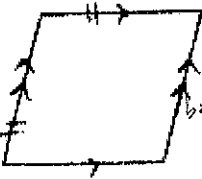
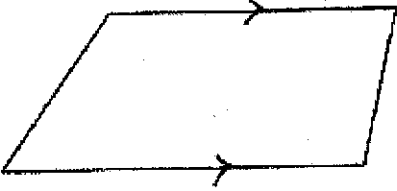



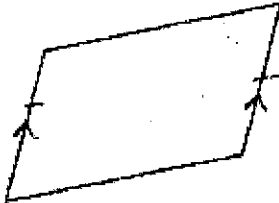
5.1-5.3 Review

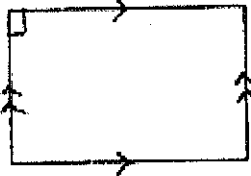
Identify whether or not the given shape must be a parallelogram. Justify your answer.

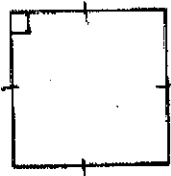
1.  Yes  
both opp sides  $\parallel$

2.  No pair  
only one pair sides  $\parallel$

3.  No, it's a kite


4.  Yes  
one pair  
opp sides  $\cong$  and  $\parallel$

5.  Yes, both pairs  
opp sides  $\parallel$

6.  Yes, both pairs  
opp sides  $\cong$

Find the value of each variable.

7. Parallelogram IJKL

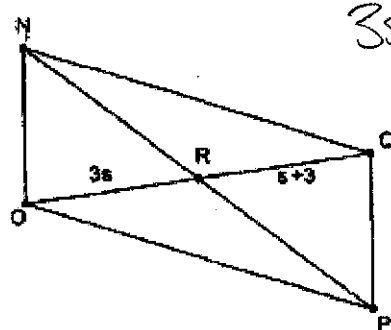


$$a+9 = 3a$$

$$a = 2a$$

$$a = 4.5$$

8. Parallelogram NOPQ

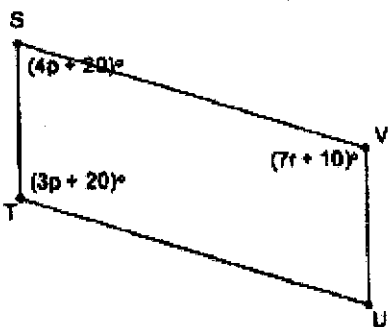


$$3s = s+3$$

$$2s = 3$$

$$s = 1.5$$

9. Parallelogram STUV



$$3p+20 = 7r+10$$

$$4p+20 + 3p+20 = 180$$

$$7p+40 = 180$$

$$7p = 140$$

$$p = 20$$

$$3(20)+20 = 7r+10$$

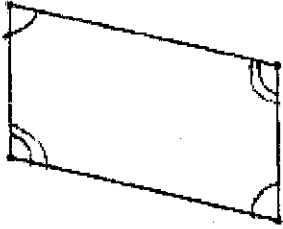
$$80 = 7r+10$$

$$70 = 7r$$

$$10 = r$$

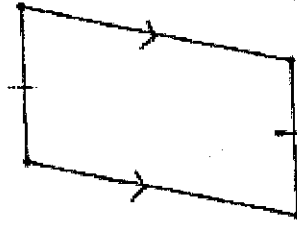
Are the following diagrams parallelograms? Explain.

10.



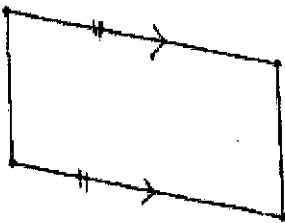
Yes, both pairs opp  
 $\angle s \cong$

11.



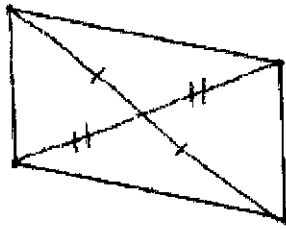
No, only one  
 pair opp sides  
 $\cong$  and another  
 pair  $\parallel$  - need  
 both!

12.



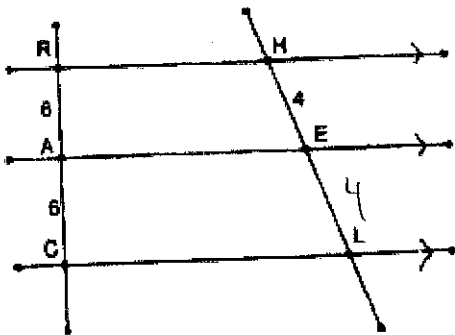
Yes, one pair opp.  
 sides  $\cong$  and  $\parallel$

13.



Yes, diagonals  
 bisect each other

14. In the figure  $\overline{RH} \parallel \overline{AE} \parallel \overline{CL}$  Find  $HL$ .



$$HL = 8$$