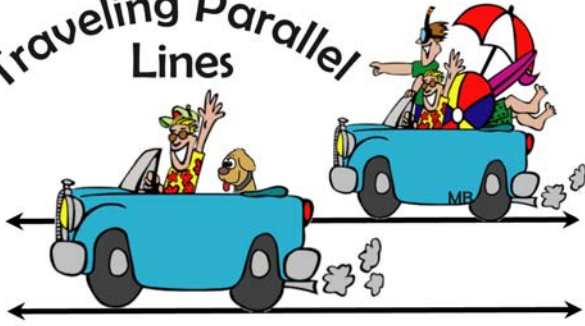


# Traveling Parallel Lines

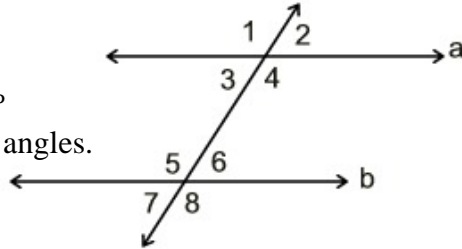


Name \_\_\_\_\_

*Directions:* Read each problem carefully and find the missing information. Show your work.

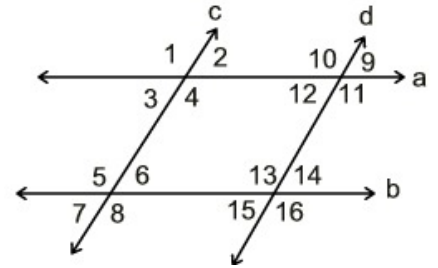
*Note:* Diagrams may not be drawn to scale.

1. Given  $a \parallel b$   
If  $m\angle 4 = 124^\circ$   
find all other angles.

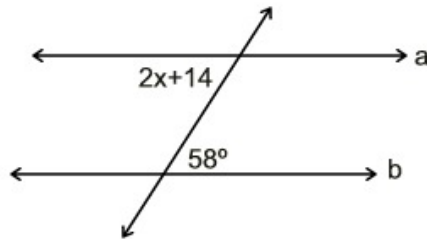


$m\angle 1 =$ _____	$m\angle 2 =$ _____
$m\angle 3 =$ _____	$m\angle 5 =$ _____
$m\angle 6 =$ _____	$m\angle 7 =$ _____
$m\angle 8 =$ _____	

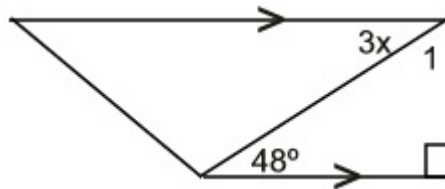
2. Given:  $a \parallel b$ ;  $c \parallel d$
- a) List all angles congruent to angle 3. \_\_\_\_\_
- b) If  $m\angle 2 = 53^\circ$ , then  $m\angle 12 =$  \_\_\_\_\_ and  $m\angle 8 =$  \_\_\_\_\_.
- c)  $m\angle 4 + m\angle 12 + m\angle 13 + m\angle 6 =$  \_\_\_\_\_.



3. Given:  $a \parallel b$   
Find  $x$ . \_\_\_\_\_

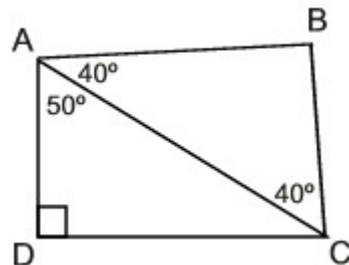


4. Find  $x$ . \_\_\_\_\_  
Find  $m\angle 1 =$  \_\_\_\_\_

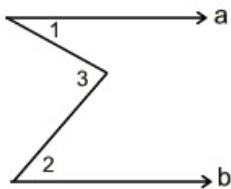


5. Which, if any, sides of this quadrilateral are parallel?  
\_\_\_\_\_

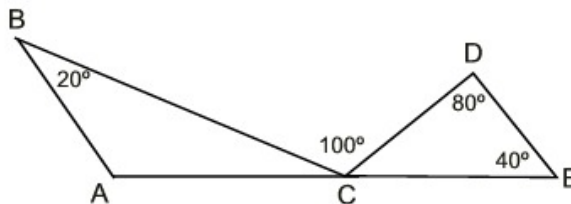
Explain:



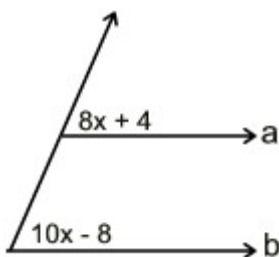
6. Given:  $a \parallel b$   
 $m\angle 1 = 30^\circ$   
 $m\angle 2 = 68^\circ$   
 Find  $m\angle 3 =$  \_\_\_\_\_



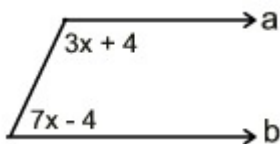
7. In this diagram, is  $\overline{AB} \parallel \overline{ED}$ ? \_\_\_\_\_  
 Explain:



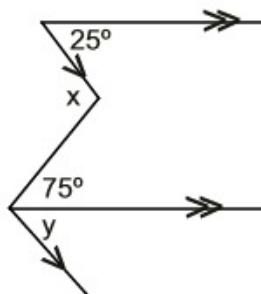
8. Given:  $a \parallel b$   
 Find  $x =$  \_\_\_\_\_  
 $8x + 4 =$  \_\_\_\_\_  
 $10x - 8 =$  \_\_\_\_\_



9. Given:  $a \parallel b$   
 Find  $x =$  \_\_\_\_\_  
 $3x + 4 =$  \_\_\_\_\_  
 $7x - 4 =$  \_\_\_\_\_



10. Given: diagram  
 Find angle labeled  $x$ : \_\_\_\_\_  
 Find angle labeled  $y$ : \_\_\_\_\_



11. Given: diagram  
 Find  $x =$  \_\_\_\_\_  
 Find  $y =$  \_\_\_\_\_  
 Find  $z =$  \_\_\_\_\_

