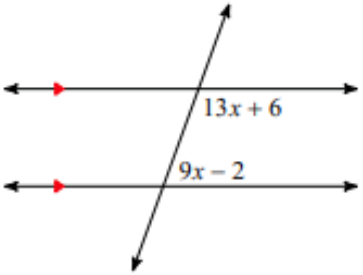
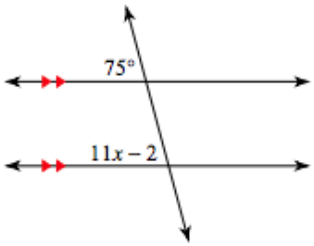
Parallel and Perpendicular Lines Review

1. Solve for x in each picture. Then plug back in to find each angle measure.

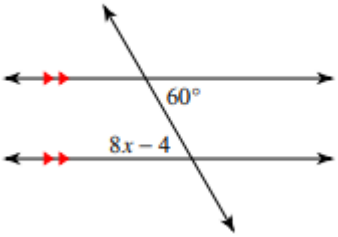
a.



b



c.



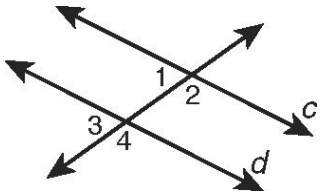
2. Tell whether each statement is true or false. Then write the converse of the following statements, and state whether the converse is true or false.

a. If an angle has a measure less than 90 degrees, then it is acute.

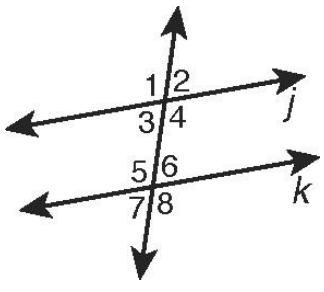
b. If a figure has four right angles, then it is a square.

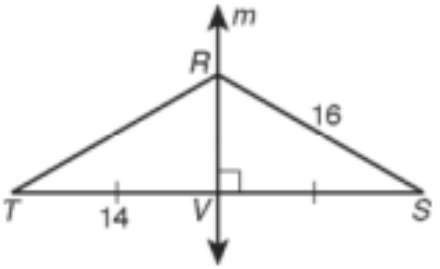
3. What is the difference between the corresponding angles theorem and the converse of the corresponding angles theorem? Explain in your own words.

4. Use the given information to show that $c \parallel d$.
State which converse you used.
Given: $m\angle 1 = 2x°$, $m\angle 3 = (3x - 31)°$, $x = 31$

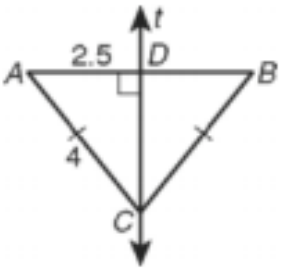


5. Use the given information to show that $j \parallel k$.
State which converse you used
Given: $m\angle 3 = 12x°$, $m\angle 5 = 18x°$, $x = 6$

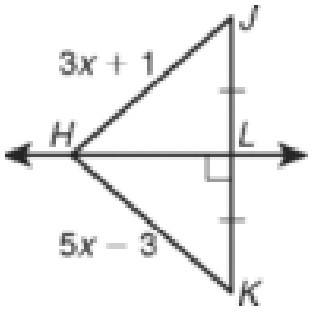


6. 

$RT =$ _____

7. 

$AB =$ _____

8. 

$HJ =$ _____

9. For each slope given, identify what slope the parallel and perpendicular line would have.

slope	parallel	perpendicular
$\frac{2}{5}$		
$-\frac{9}{8}$		
8		
1		
0		
$\frac{1}{2}$		

Are the following lines parallel perpendicular or neither? How do you know?

10. $y = 2x + 10$, $y = -2x + 1$

11. $y = 5$, $x = 2$

12. $y = -4x + 1$, $y = \frac{1}{4}x + 2$

13. $y = 10x$, $y = 4 + 10x$

Write the equation of a line that is parallel AND a line that is perpendicular to a given line through the given point.

14. $y = 2x + 9$, (-1, 4)

15. $y = -\frac{1}{4}x - 5$, (8, 2)