

Answers Only

3.2 Day 2 Homework

Page 158 - 160 # 6 - 19, 27-28, 30, and 34

5. **Safety** The railing of a wheelchair ramp is parallel to the ramp. Find x and y in the diagram.

$$x=8$$

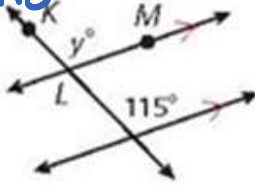
$$y=9$$



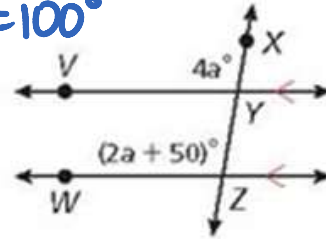
$$\begin{aligned} -4x + 6y &= 86 \quad (\text{alt. int } \angle s \cong) \\ 5x + 6y &= 94 \quad (\text{alt int } \angle s \cong) \\ \hline x &= 8 \\ 4(8) + 6y &= 86 \\ 6y &= 54 \\ y &= 9 \end{aligned}$$

Find each angle measure.

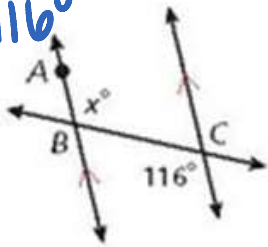
6. $m\angle KLM = 115^\circ$



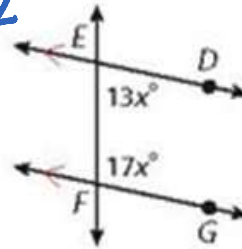
7. $m\angle VYX = 100^\circ$



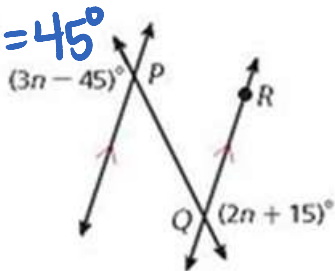
8. $m\angle ABC = 116^\circ$



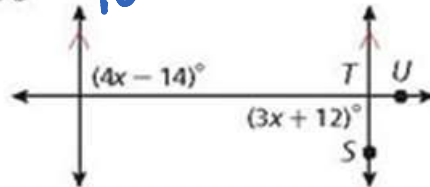
9. $m\angle EFG = 102^\circ$



10. $m\angle PQR = 45^\circ$



11. $m\angle STU = 90^\circ$



12. **Parking** In the parking lot shown, the lines that mark the width of each space are parallel.

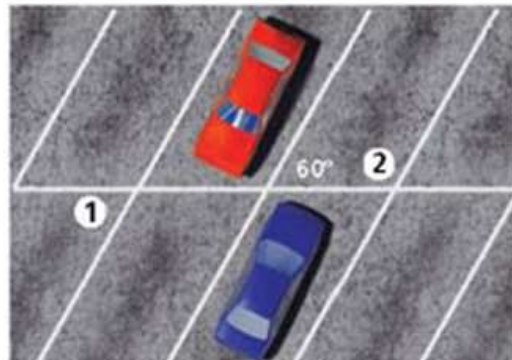
$$m\angle 1 = (2x - 3y)^\circ$$

$$m\angle 2 = (x + 3y)^\circ$$

Find x and y .

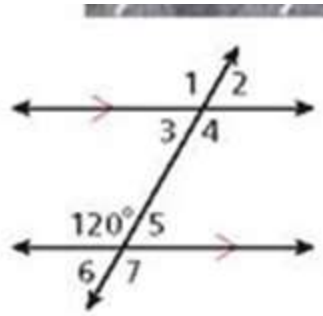
$$x=60$$

$$y=20$$



Find each angle measure. Justify each answer with a postulate or theorem.

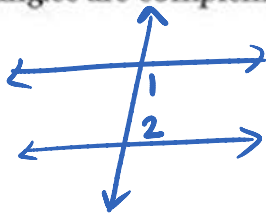
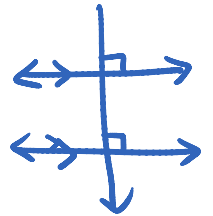
13. $m\angle 1$ 14. $m\angle 2$ 15. $m\angle 3$
 16. $m\angle 4$ 17. $m\angle 5$ 18. $m\angle 6$
 19. $m\angle 7$



13. 120° by corr \angle 's
 14. 60° by Linear Pair \angle 's
 15. 60° by Same Side Int \angle 's
 16. 120° by Alt Int \angle 's
 17. 60° by Linear Pair \angle 's
 18. 60° by Linear Pair \angle 's
 19. 120° by Vertical \angle 's

Draw the given situation or tell why it is impossible.

27. Two parallel lines are intersected by a transversal so that the corresponding angles are supplementary.
 28. Two parallel lines are intersected by a transversal so that the same-side interior angles are complementary.



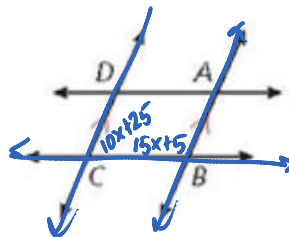
Situation is impossible, b/c when 11 lines are cut by a transversal, same side int \angle 's are supp (not comp)

30. **Land Development** A piece of property lies between two parallel streets as shown. $m\angle 1 = (2x + 6)^\circ$, and $m\angle 2 = (3x + 9)^\circ$. What is the relationship between the angles? What are their measures?



Same side int \angle 's
 $m\angle 1 = 72^\circ$ $m\angle 2 = 108^\circ$

31. **/// ERROR ANALYSIS ///** In the figure, $m\angle ABC = (15x + 5)^\circ$, and $m\angle BCD = (10x + 25)^\circ$. Which value of $m\angle BCD$ is incorrect? Explain.



A is incorrect, b/c the student set them equal to each other. Since $\angle ABC$ and $\angle BCD$ are supplementary, ^{b/c same side int's} the student should have added their measures together to equal 180° .

A

$$\begin{array}{r} 15x + 5 = 10x + 25 \\ -10x \quad -10x \\ \hline 5x + 5 = 25 \\ -5 \quad -5 \\ \hline 5x = 20 \\ x = 4 \end{array}$$

$$m\angle BCD = 10(4) + 25 = 65^\circ$$

B

$$\begin{array}{r} (15x + 5) + (10x + 25) = 180 \\ 25x + 30 = 180 \\ -30 \quad -30 \\ \hline 25x = 150 \\ x = 6 \end{array}$$

$$m\angle BCD = 10(6) + 25 = 85^\circ$$