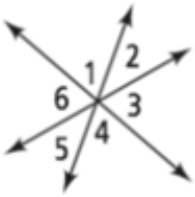
NAME:_____ DATE: _____ BLOCK/PERIOD:_____

Line & Angle Theorems

Independent Practice + Homework

Developing Proof Complete the following proof by filling in the blanks.

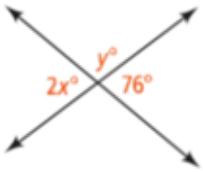


Given: $\angle 1 \cong \angle 3$

Prove: $\angle 6 \cong \angle 4$

Statements	Reasons
1) $\angle 1 \cong \angle 3$	1) Given
2) $\angle 3 \cong \angle 6$	2) a. ?
3) b. ?	3) Transitive Property of Congruence
4) $\angle 1 \cong \angle 4$	4) c. ?
5) $\angle 6 \cong \angle 4$	5) d. ?

6.)

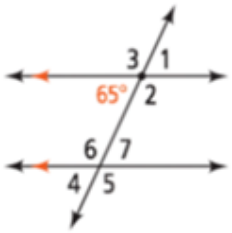


x = _____

Y = _____

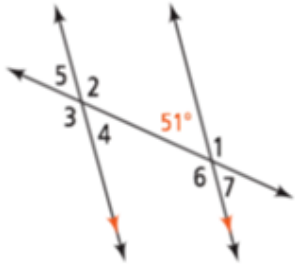
Identify all the numbered angles that are congruent to the given angle. Justify your answers.

7.



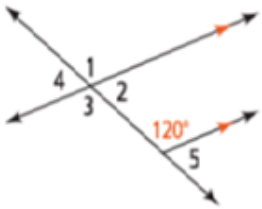
Angles _____

8.



Angles _____

9.



Angles _____

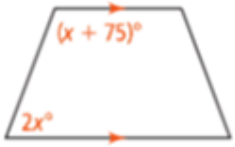
10. Developing Proof Supply the missing reasons in the two-column proof.

Given: $a \parallel b$, $c \parallel d$

Prove: $\angle 1 \cong \angle 3$

Statements	Reasons
1) $a \parallel b$	1) Given
2) $\angle 3$ and $\angle 2$ are supplementary.	2) a. ?
3) $c \parallel d$	3) Given
4) $\angle 1$ and $\angle 2$ are supplementary.	4) b. ?
5) $\angle 1 \cong \angle 3$	5) c. ?

11. Error Analysis Which solution for the value of x in the figure shown is incorrect? Explain.



A.

$2x = x + 75$
$x = 75$

B.

$2x + (x + 75) = 180$
$3x + 75 = 180$
$3x = 105$
$x = 35$