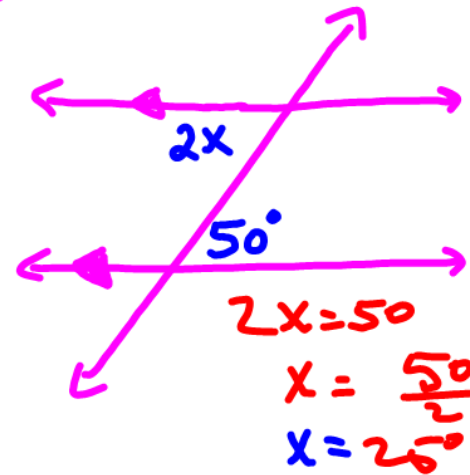
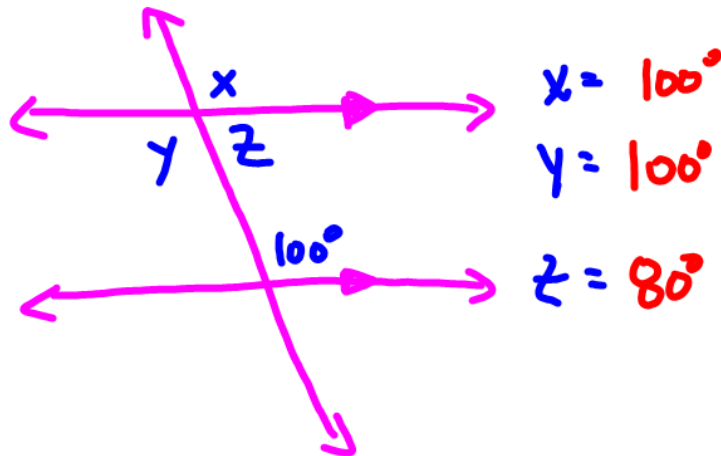


## Warm-up

1) Find the Missing  $\angle$ 's    2) Find  $x$



3) Write the converse:

If it is sunny, then Voz is smiling

If Voz is smiling, then it is sunny

Combine like terms.

4)  ~~$6x - 2 + 2x - 3$~~

$9x - 5$

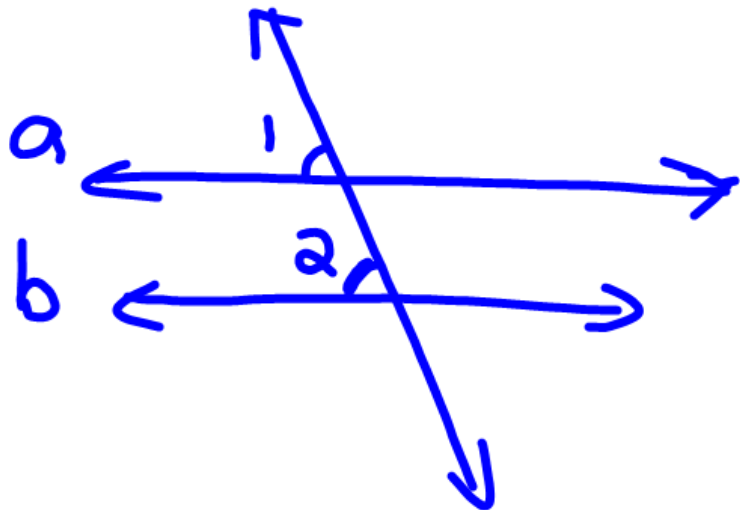
5)  ~~$2x^2 + 5x - 10 - 7x^2$~~

$-5x^2 + 5x - 10$

### 3.3 Prove Lines are Parallel

Original: If lines are parallel, then  
Corresponding  $\angle$ 's are congruent

Converse: If corresponding  $\angle$ 's are congruent,  
then the lines are parallel.

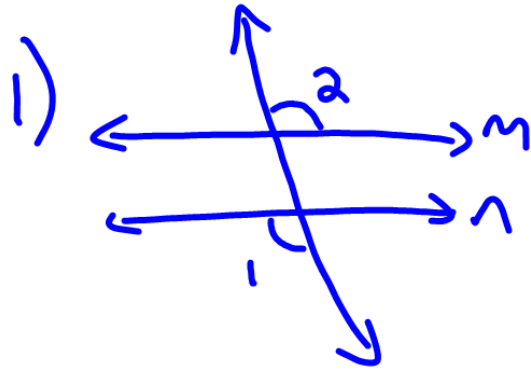


} Since  $\angle 1 \cong \angle 2$ ,  
line a  $\parallel$  line b

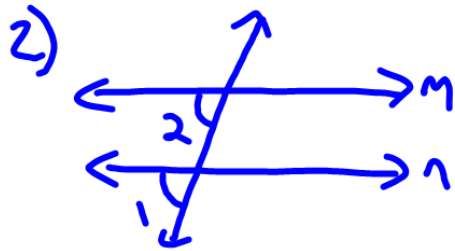
So, how can we prove lines are  $\parallel$ ?

- 1) If corresponding  $\angle$ 's are congruent
- 2) If alt. interior  $\angle$ 's " "
- 3) If alt. exterior  $\angle$ 's " "
- 4) If consecutive interior angles are supplementary (add to  $180^\circ$ )

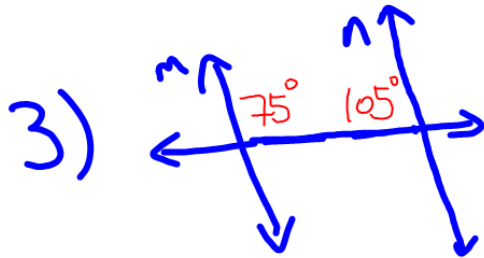
# Example - Is $m \parallel n$ ? Explain why or not



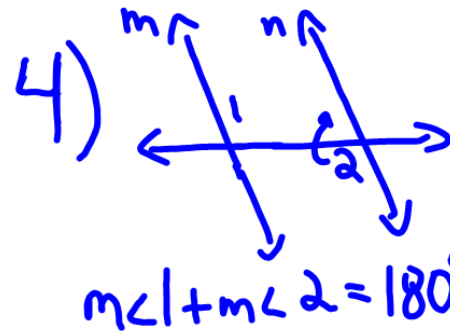
Alt Ext  $\angle$ 's are  $\cong$ ,  
 $m \parallel n$



Corresp.  $\angle$ 's are  $\cong$ ,  
 so  $m \parallel n$



Consec interior  $\angle$ 's  
 add to  $180^\circ$ ,  
 so  $m \parallel n$



Alt int  $\angle$ 's NOT  $\cong$ .  
 so  $m \not\parallel n$