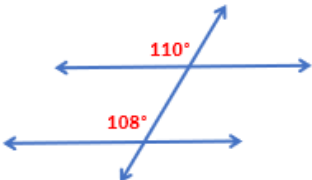
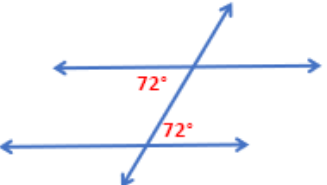
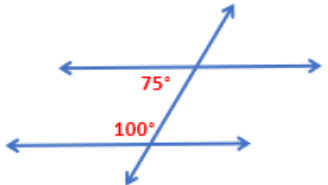
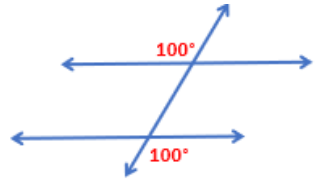
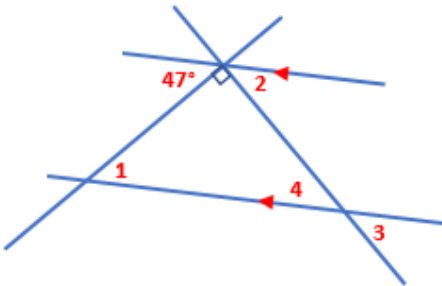
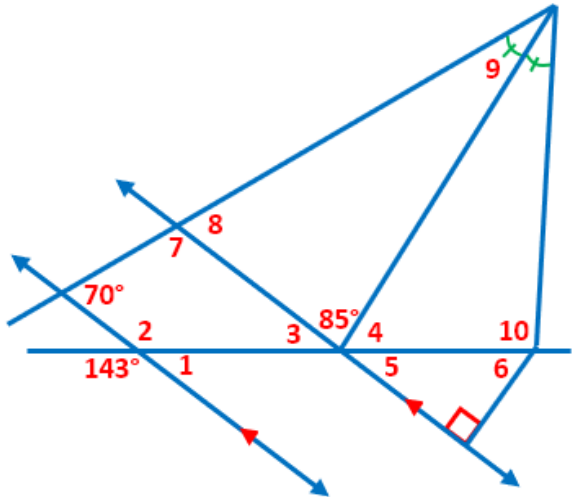
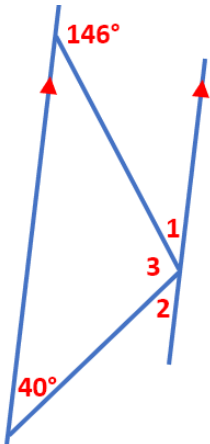


Parallel Line Theorems (or Postulate):	Converse of the Parallel Line Theorems (or Postulate):
1) If lines parallel, then <u>corresponding</u> \angle 's \cong .	1) If <u>corresponding</u> \angle 's \cong , then lines are parallel.
2) If lines parallel, then	2) _____ then lines are parallel.
3) If lines parallel, then	3) _____ then lines are parallel.
4) If lines parallel, then	4) _____ then lines are parallel.

1) Determine if each pair of lines are parallel or not parallel and state how you know.

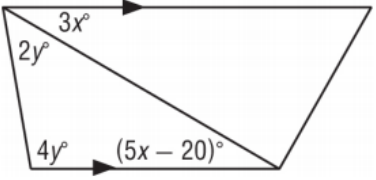
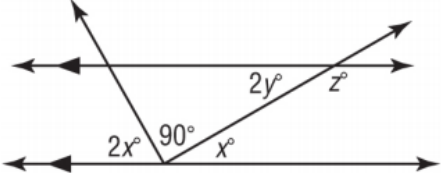
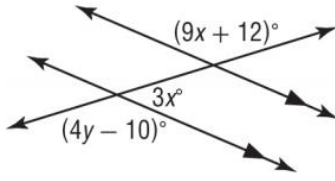
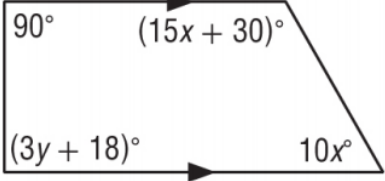
<p>a)</p> 	<p>b)</p> 	<p>c)</p> 	<p>d)</p> 
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2) Solve the angle puzzles. Do **not** use a protractor. Figures may not be to scale.

<p>a)</p>  <p> $m\angle 1 =$ $m\angle 2 =$ $m\angle 3 =$ $m\angle 4 =$ </p>	<p>b)</p>  <p> $m\angle 1 =$ $m\angle 2 =$ $m\angle 3 =$ $m\angle 4 =$ $m\angle 5 =$ $m\angle 6 =$ $m\angle 7 =$ $m\angle 8 =$ $m\angle 9 =$ $m\angle 10 =$ </p>
<p>c)</p>  <p> $m\angle 1 =$ $m\angle 2 =$ $m\angle 3 =$ </p>	

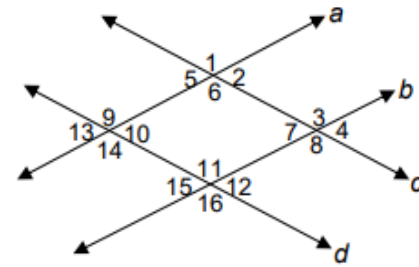
HW#7

For 1-4: Write and solve equations to find the value of each variable. Complete in your notebook.

<p>1) </p>	<p>2) </p>
<p>3) </p>	<p>4) </p>

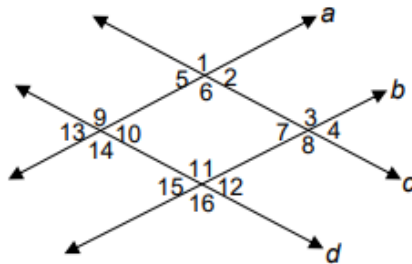
Use the figure and the given information to determine which lines are parallel. Justify using a theorem or postulate. Choose from: **(E)** Converse of Corresponding \angle 's Postulate, **(F)** Converse of Alt Int \angle 's Theorem, **(G)** Converse of Same-Side Int \angle 's Theorem, or **(H)** Converse of Ext Int \angle 's Theorem.

- 5) If $\angle 9 \cong \angle 16$ then $\underline{\hspace{1cm}} \parallel \underline{\hspace{1cm}}$ by $\underline{\hspace{1cm}}$
- 6) If $\angle 12 \cong \angle 7$ then $\underline{\hspace{1cm}} \parallel \underline{\hspace{1cm}}$ by $\underline{\hspace{1cm}}$
- 7) If $\angle 4 \cong \angle 12$ then $\underline{\hspace{1cm}} \parallel \underline{\hspace{1cm}}$ by $\underline{\hspace{1cm}}$
- 8) If $\angle 9 \cong \angle 6$ then $\underline{\hspace{1cm}} \parallel \underline{\hspace{1cm}}$ by $\underline{\hspace{1cm}}$
- 9) If $\angle 5 \cong \angle 13$ then $\underline{\hspace{1cm}} \parallel \underline{\hspace{1cm}}$ by $\underline{\hspace{1cm}}$
- 10) If $m\angle 6 + m\angle 7 = 180^\circ$ then $\underline{\hspace{1cm}} \parallel \underline{\hspace{1cm}}$ by $\underline{\hspace{1cm}}$
- 11) If $m\angle 7 + m\angle 11 = 180^\circ$ then $\underline{\hspace{1cm}} \parallel \underline{\hspace{1cm}}$ by $\underline{\hspace{1cm}}$



12) Complete the blanks in the following proof. Geometrically mark the diagram with the given and each step of the proof.

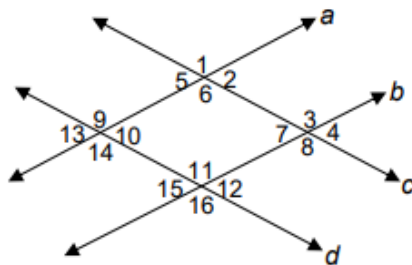
Given: $a \parallel b, c \parallel d$
Prove: $\angle 1 \cong \angle 16$



Statements	Reasons
1)	1) given
2) $\angle 1 \cong \angle 8$	2)
3)	3) given
4) $\angle 8 \cong \angle 16$	4)
5)	5) Transitive prop. \cong

13) Complete the blanks in the following proof. Geometrically mark the diagram with the given and each step of the proof.

Given: $c \parallel d, a \parallel b$
Prove: $\angle 9 \cong \angle 8$



Statements	Reasons
1)	1) given
2) $\angle 9 \cong \angle 6$	2)
3)	3) given
4)	4)
5)	5)

14) Solve the following systems. Do these in your notebook.

a) $\begin{cases} 3x + y = -14 \\ 4x + 3y = -22 \end{cases}$ b) $\begin{cases} 5x + 4y = -13 \\ 3x - 2y = 23 \end{cases}$ c) $\begin{cases} y = -3x - 6 \\ 2x + 3y = 17 \end{cases}$

15) Factor: (in notebook)

- a) $2x^2 - 11x + 12$
- b) $3x^2 - 11x + 6$
- c) $5x^2 - 12x + 4$