Name: _____ Date: _____ Row: _____ Period: _____

Assignment #: _____

Properties of Parallel Lines

For use after Section 3–2

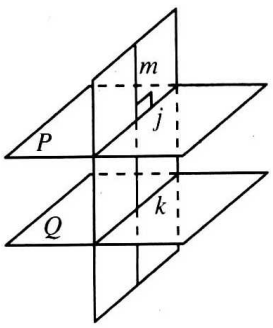
State the theorem that justifies the statement about the diagram.

1. If plane P is parallel to plane Q, then $j \parallel k$. _____

_____

2. If $j \parallel k$ and $m \perp j$, then $m \perp k$. _____

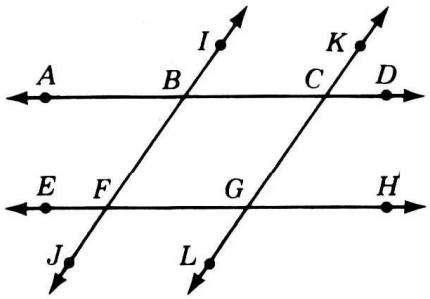
_____



Exs. 1, 2

Classify each pair of angles as alternate interior, same-side interior, corresponding angles, or none of these.

3. $\angle ABF$ and $\angle BFG$ _____
4. $\angle ABI$ and $\angle BCK$ _____
5. $\angle DCG$ and $\angle HGC$ _____
6. $\angle ABI$ and $\angle FGC$ _____



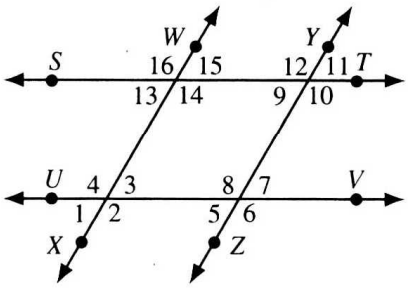
Exs. 3–6

7. If $\overleftrightarrow{ST} \parallel \overleftrightarrow{UV}$, name all angles that must be congruent to $\angle 3$.

_____

8. If $\overleftrightarrow{WX} \parallel \overleftrightarrow{YZ}$, name all angles that must be congruent to $\angle 8$.

_____



Exs. 7–12

In Exercises 9–12, assume $\overleftrightarrow{ST} \parallel \overleftrightarrow{UV}$ and $\overleftrightarrow{WX} \parallel \overleftrightarrow{YZ}$.

9. Name all angles congruent to $\angle 9$.

_____

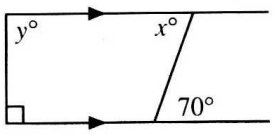
10. Name all angles supplementary to $\angle 9$. _____

11. If $m\angle 6 = 125$, then $m\angle 11$ = _____ and $m\angle 15$ = _____.

12. If $m\angle 14 = y$, then $m\angle 4$ = _____ and $m\angle 3$ = _____.

Find the values of x and y.

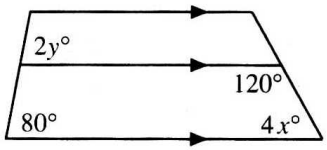
13.



x = _____

y = _____

14.



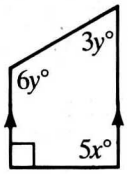
x = _____

y = _____

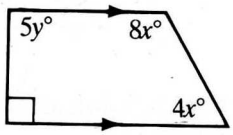
3.2B WORKSHEET

Find the values of x and y.

1.



2.



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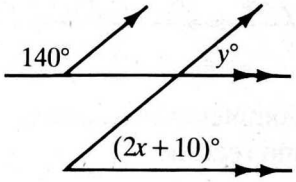

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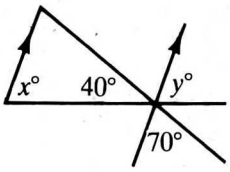

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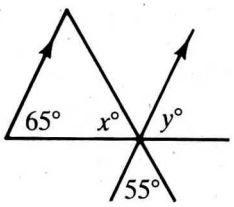

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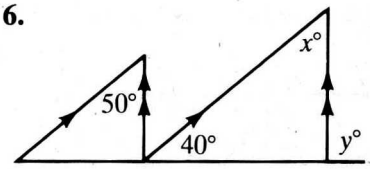
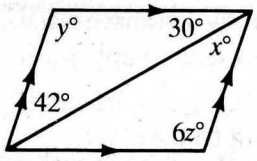


Find the values of x, y, and z.

7.



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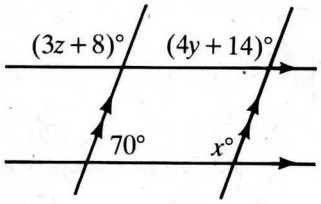
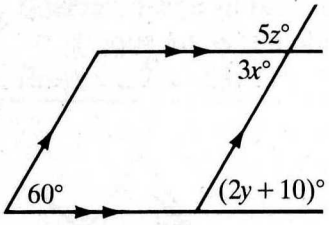
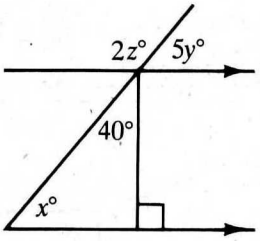


9.



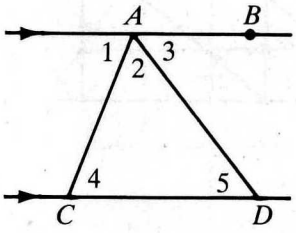
10.



11. Complete the following proof by supplying the missing statements and reasons.

Given: $\overleftrightarrow{AB} \parallel \overleftrightarrow{CD}$

Prove: $m\angle 4 + m\angle 2 + m\angle 5 = 180$



Statements	Reasons
1. _____	1. _____
2. $m\angle 1 = m\angle$?; $m\angle 3 = m\angle$?	2. _____
3. $m\angle 1 + m\angle 2 + m\angle 3 =$?	3. _____
4. _____	4. _____