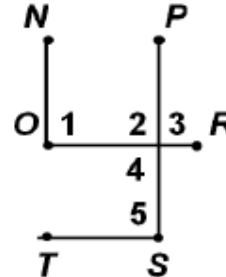


Geometry
Handout 3B
Section 3-3

Name _____

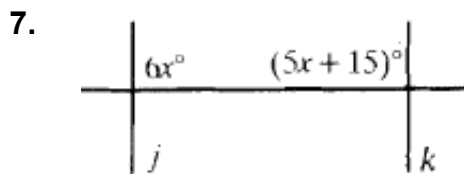
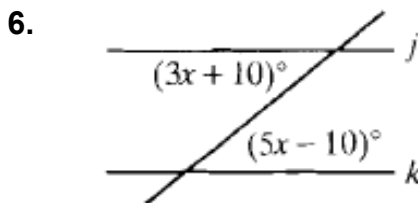
For #1-5, name the segments that must be parallel based on the given information. Write out the reason that supports your answer. If no segments are parallel, write "none".

1. $\angle 2 \cong \angle 5$
2. $\angle 1 \cong \angle 4$
3. $m\angle 4 + m\angle 5 = 180$
4. $\angle 3 \cong \angle 5$
5. $\overline{OR} \perp \overline{ON}$ and $\overline{OR} \perp \overline{PS}$

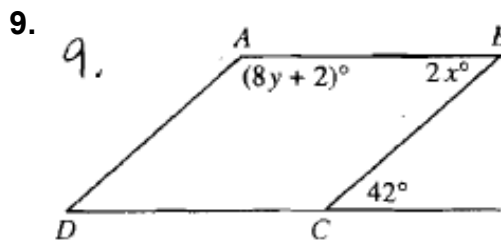
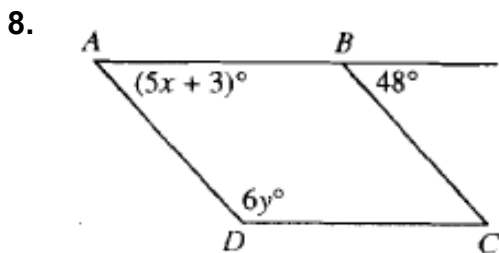


Copy figures on your paper and show work.

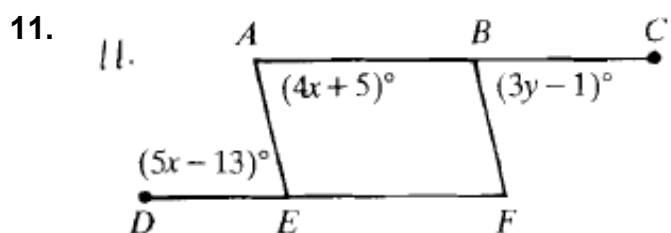
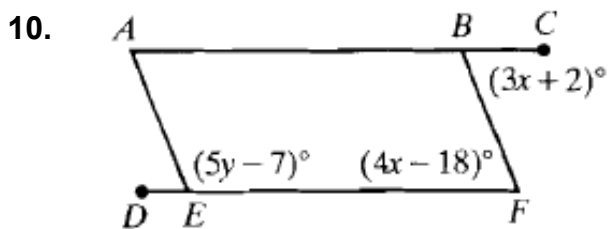
Find the value of x that makes $j \parallel k$.



Find the values of x and y that make $\overline{AB} \parallel \overline{DC}$ and $\overline{AD} \parallel \overline{BC}$.



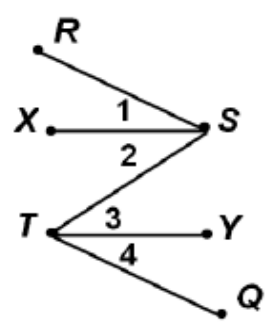
Find the values of x and y that make $\overline{AC} \parallel \overline{DF}$ and $\overline{AE} \parallel \overline{BF}$.



12. Copy everything and complete the proof.

Given: $m\angle RST = 90$, $m\angle QTS = 90$,
 $m\angle 1 = m\angle 4$

Prove: $\overline{XS} \parallel \overline{TY}$



STATEMENTS	REASONS
1. $m\angle RST = 90$, $m\angle QTS = 90$	1. ?
2. $m\angle RST = m\angle QTS$	2. ?
3. $m\angle RST = m\angle 1 + m\angle 2$ $m\angle QTS = m\angle 3 + m\angle 4$	3. ?
4. $m\angle 1 + m\angle 2 = m\angle 3 + m\angle 4$	4. ?
5. $m\angle 1 = m\angle 4$	5. ?
6. $m\angle 2 = m\angle 3$	6. ?
7. $\overline{XS} \parallel \overline{TY}$	7. ?

Copy given, prove, and figure for each problem and write a logical proof.

13. Given: $\angle 1 \cong \angle 3$, $\angle 3 \cong \angle 4$
 Prove: $j \parallel k$

14. Given: $\angle 1 \cong \angle 2$, $\angle 5 \cong \angle 4$
 Prove: $j \parallel k$

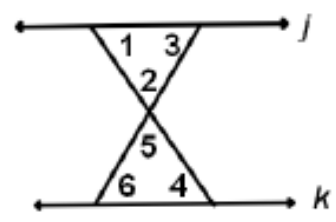
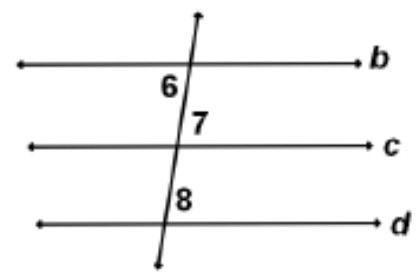
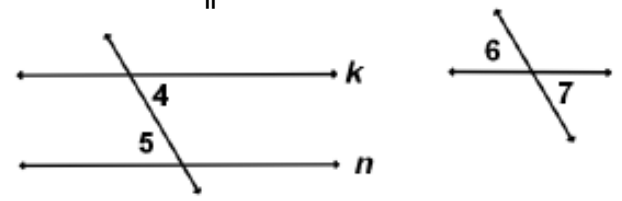


Figure for #13-14

15. Given: $\angle 6 \cong \angle 7$, $b \parallel d$
 Prove: $c \parallel d$



16. Given: $\angle 4 \cong \angle 6$, $\angle 7 \cong \angle 5$
 Prove: $k \parallel n$



17. Given: $\angle 4 \cong \angle 3$, $p \parallel q$
 Prove: $a \parallel b$

18. Given: $a \parallel b$, $\angle 1 \cong \angle 5$
 Prove: $p \parallel q$

19. Given: $m\angle 6 + m\angle 3 = 180$, $p \parallel q$
 Prove: $a \parallel b$

20. Given: $m\angle 8 + m\angle 1 = 180$, $a \parallel b$
 Prove: $p \parallel q$

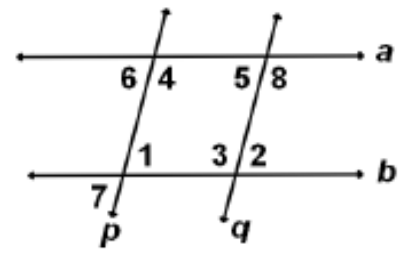


Figure for #17-20