Name_____ Class _____ Date_____

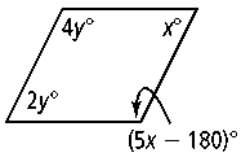
6-3 Practice

Form G

Proving That a Quadrilateral Is a Parallelogram

Algebra For what values of x and y must each figure be a parallelogram?

1.



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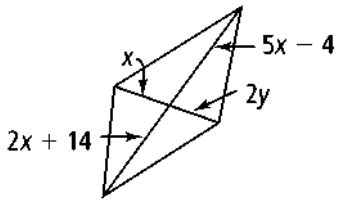

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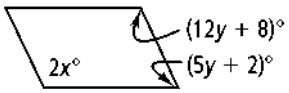

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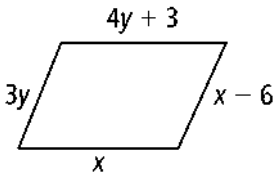
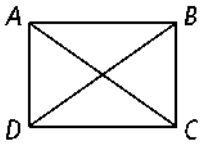


Name_____ Class _____ Date_____

5. Developing Proof Complete the two-column proof. Remember, a rectangle is a parallelogram with four right angles.



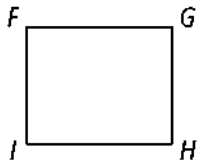
Given: $\square ABCD$, with $\overline{AC} \cong \overline{BD}$

Prove: $ABCD$ is a rectangle.

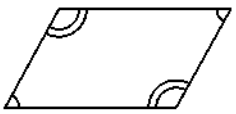
Statements	Reasons
1) $\square ABCD$, with $\overline{AC} \cong \overline{BD}$	**1)** Given
2) ?	**2)** Opposite sides of a $\square$ are congruent.
3) $\overline{DC} \cong \overline{CD}$	**3)** ?
4) ?	**4)** SSS
5) $\angle ADC$ and $\angle BCD$ are supplementary.	**5)** ?
6) $\angle ADC \cong \angle BCD$	**6)** CPCTC
7) ?	**7)** Congruent supplementary angles

Can you prove that the quadrilateral is a parallelogram based on the given information? Explain.

6. $\overline{FG} \parallel \overline{IH}, \overline{FI} \parallel \overline{GH}$



7.



8.