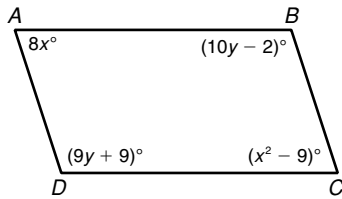


**LESSON** **Practice B**  
**6-3** **Conditions for Parallelograms**

For Exercises 1 and 2, determine whether the figure is a parallelogram for the given values of the variables. Explain your answers.

1.  $x = 9$  and  $y = 11$

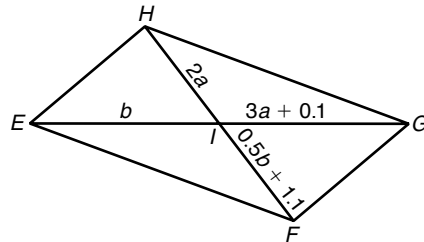


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2.  $a = 4.3$  and  $b = 13$

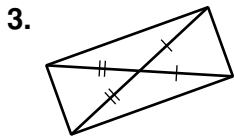


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Determine whether each quadrilateral must be a parallelogram. Justify your answers.



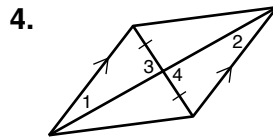
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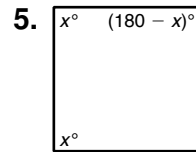
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Use the given method to determine whether the quadrilateral with the given vertices is a parallelogram.

6. Find the slopes of all four sides:  $J(-4, -1)$ ,  $K(-7, -4)$ ,  $L(2, -10)$ ,  $M(5, -7)$

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7. Find the lengths of all four sides:  $P(2, 2)$ ,  $Q(1, -3)$ ,  $R(-4, 2)$ ,  $S(-3, 7)$

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8. Find the slopes and lengths of one pair of opposite sides:

$T(\frac{3}{2}, -2)$ ,  $U(\frac{3}{2}, 4)$ ,  $V(-\frac{1}{2}, 0)$ ,  $W(-\frac{1}{2}, -6)$

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