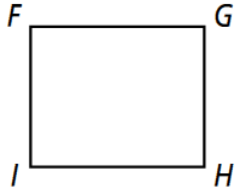
Name: _____

10.2.D1 • Parallelograms

Past due on: _____ Period: _____

Which property (or definition) can you use to prove that the quadrilateral is a parallelogram based on the given information?

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



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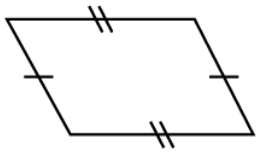

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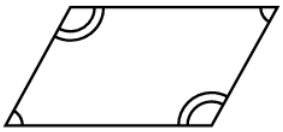

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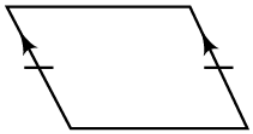
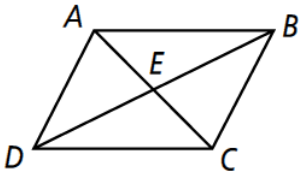


5. $\overline{AE} \cong \overline{EC}, \overline{BE} \cong \overline{ED}$



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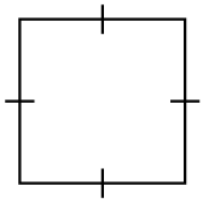

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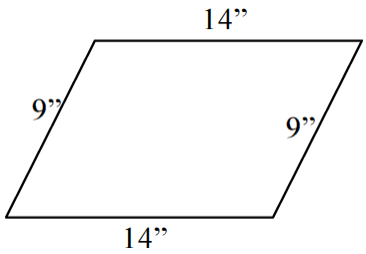

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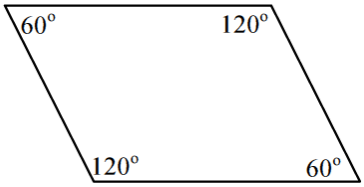

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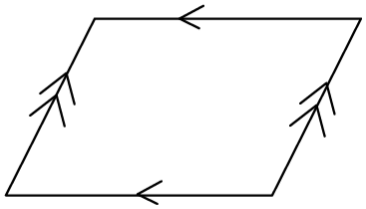

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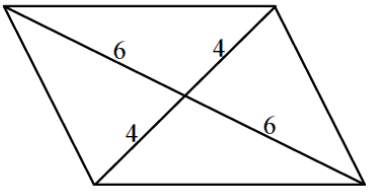

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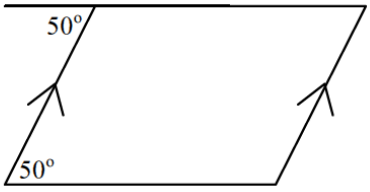

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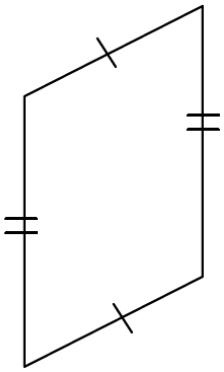
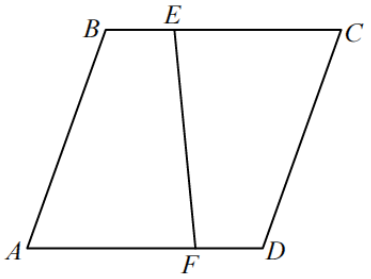


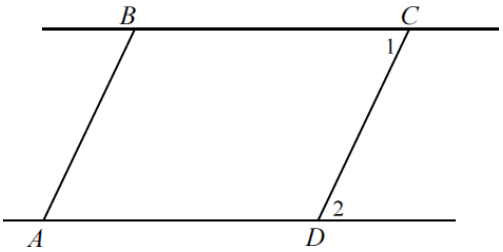
PROOFS MUST BE DONE ON PROOF PAPER

Use the definition of parallelogram, as well as those properties we proved in class.

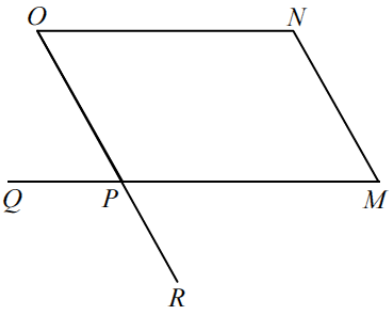
13. Given: $\overline{AB} \cong \overline{CD}$
$\overline{BE} \cong \overline{FD}$
$\overline{EC} \cong \overline{AF}$
Prove: $ABCD$ is a $\square$



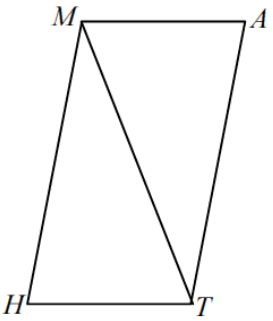
14. Given: $\overline{AB} \parallel \overline{CD}$
$\angle 1 \cong \angle 2$
Prove: $ABCD$ is a $\square$

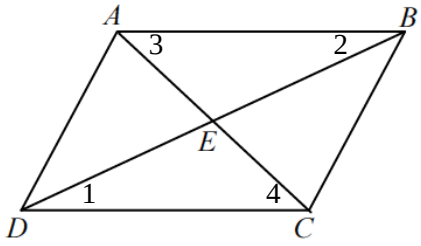


15. Given: $\angle O \cong \angle M$
$\angle QPR \cong \angle ONM$
Prove: $MNOP$ is a $\square$



16. Given: $\overline{MA} \cong \overline{HT}$
$\angle AMT \cong \angle HTM$
Prove: $MATH$ is a $\square$



17. Prove the property: *The diagonals of a parallelogram bisect each other*
Hint: This proof requires congruent triangles.

Given: $ABCD$ is a $\square$
Prove: $\overline{AC}$ & $\overline{BD}$ bisect each other