Geometry
Chap. 4 section 3
Proofs

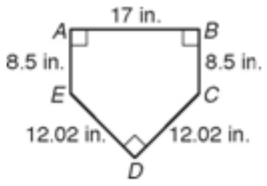
Name: _____
Date: _____
Period: _____

LESSON 4-3

Practice B

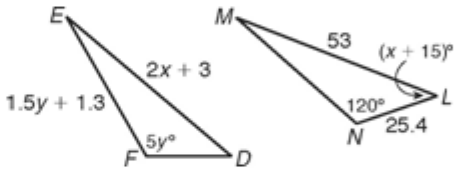
Congruent Triangles

In baseball, home plate is a pentagon. Pentagon *ABCDE* is a diagram of a regulation home plate. The baseball rules are very specific about the exact dimensions of this pentagon so that every home plate is congruent to every other home plate. If pentagon *PQRST* is another home plate, identify each congruent corresponding part.



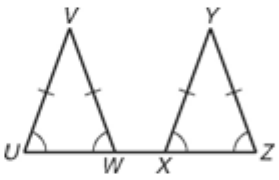
1. $\angle S \cong$ _____
2. $\angle B \cong$ _____
3. $\overline{EA} \cong$ _____
4. $\angle E \cong$ _____
5. $\overline{PQ} \cong$ _____
6. $\overline{TS} \cong$ _____

Given: $\triangle DEF \cong \triangle LMN$. Find each value.



7. $m\angle L =$ _____
8. $EF =$ _____
9. Write a two-column proof.

Given: $\angle U \cong \angle UWV \cong \angle ZXY \cong \angle Z$, $\overline{UV} \cong \overline{WV}$, $\overline{XY} \cong \overline{ZY}$, $\overline{UX} \cong \angle \overline{WZ}$



Prove: $\triangle UVW \cong \triangle XYZ$

Proof:

10. **Given:** $\triangle CDE \cong \triangle HIJ$, $DE = 9x$, and $IJ = 7x + 3$. Find x and DE.

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11. **Given:** $\triangle CDE \cong \triangle HIJ$, $m\angle D = (5y + 1)°$, and $m\angle I = (6y - 25)°$. Find y and $m\angle D$.

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