

5.2 Congruent Polygons CYU

Use when you get it right all by yourself

S Use when you did it all by yourself, but made a silly mistake

H Use when you could do it alone with a little help from teacher or peer

G Use when you completed the problem in a group

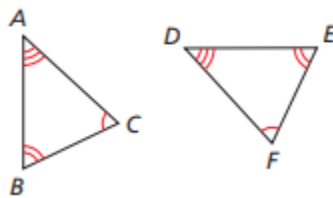
X Use when a question was attempted but wrong (get help)

N Use when a question was not even attempted

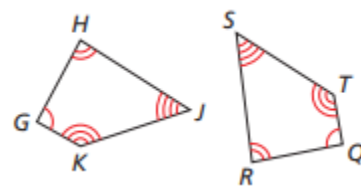
CONCEPTS	BASIC	INTERMEDIATE	ADVANCED
Identifying congruent corresponding parts	1	2	8, 9, 10
Writing congruence statements	1	2	
Solving for variables using corresponding parts	3	4	4
Proving & Explaining polygons are congruent	5	8	9, 10
Third Angles Theorem	6	7, 8	7, 9
Segment Bisector	8		
Definition of midpoint	8		
Vertical Angles	8		9
AIA, AEA, SSIA, SSEA, Corresponding Angles	8		
Congruent segments/angles	8		9, 10
Definition of Isosceles Triangles			9, 10

Identify all pairs of congruent corresponding parts. Then write another congruence statement for the polygons.

1. $\triangle ABC \cong \triangle DEF$

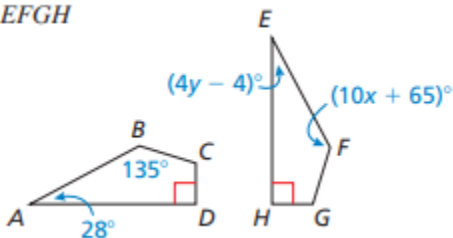


2. $GHJK \cong QRST$

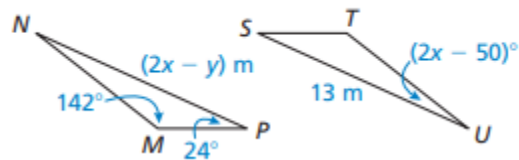


Find the values of x and y .

3. $ABCD \cong EFGH$

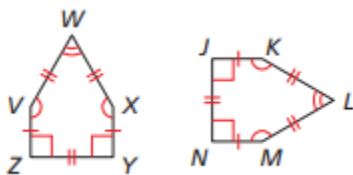


4. $\triangle MNP \cong \triangle TUS$

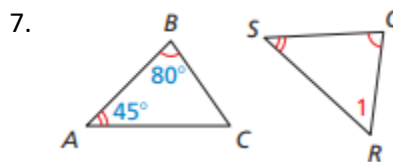
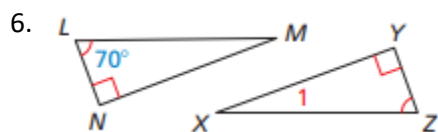


Show that the polygons are congruent. Explain your reasoning in a complete sentence.

5.



Find the measure of angle one.

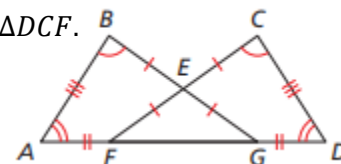


8. **PROOF ON A SEPARATE PAPER:** *Triangular postage stamps, like the ones shown, are highly valued by stamp collectors. Prove that $\triangle AEB \cong \triangle CED$.*

Given: $\overline{AB} \parallel \overline{DC}$, $\overline{AB} \cong \overline{DC}$, E is the midpoint of \overline{AC} & \overline{BD} .

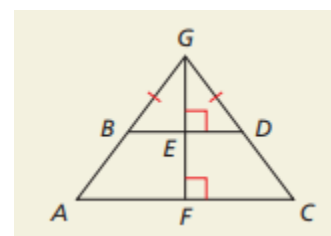
Prove: $\triangle AEB \cong \triangle DCF$

9. **PROOF ON A SEPARATE PAPER:** *Use the information in the figure to prove that $\triangle ABG \cong \triangle DCF$.*



10. In the diagram, $\triangle BEF \cong \triangle DEF$.

- Explain how you know that $\overline{BE} \cong \overline{DE}$ & $\angle ABE \cong \angle CDE$.
- Explain how you know that $\angle GBE \cong \angle GDE$.
- Explain how you know that $\angle GEB \cong \angle GED$.
- Do you have enough information to prove that $\triangle BEG \cong \triangle DEG$? Explain



Use the given information to write and solve a system of linear equations to find the values of x and y .

11. $\triangle LMN \cong \triangle PQR$, $m\angle L = 40^\circ$, $m\angle M = 90^\circ$, $m\angle P = (17x - y)^\circ$, $m\angle R = (2x + 4y)^\circ$

12. $\triangle STU \cong \triangle XYZ$, $m\angle T = 28^\circ$, $m\angle U = (4x + y)^\circ$, $m\angle X = 130^\circ$, $m\angle Y = (8x - 6y)^\circ$

CYU Reflection: *How far can you go: basic, intermediate, or advanced?*

Rate your mastery level!

How confident are you with the skills this CYU covered? Circle the score you would give yourself.

