# Angle Angle Side Worksheet and Activity 

This worksheet contains 9 Angle Angle Side Proofs including a challenge proof and a Think Pair Share (at the end)

URL on the Angle Angle Side Postulate
http://www.mathwarehouse.com/geometry/congruent triangles/angle-angle-sidepostulate.php

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## Warm Up

Why is $\angle \mathrm{BAD} \cong \angle \mathrm{ADE}$ ?


## Identify Angle Angle Side Relationships

Which pair of triangles below does NOT illustrate the AAS relationship?


B


## Proof A)

(web powerpoint)


## Proof B)

## Given:

$\overline{\mathrm{BD}}$ is an altitude
$\angle B A D \cong \angle B C A$
Prove: $\triangle \mathrm{ABD} \cong \triangle \mathrm{CBD}$


## Proof C)

Given: JM bisects KN, $\angle K \cong \angle N$
Prove: $\triangle \mathrm{JLK} \cong \triangle \mathrm{MLN}$


## Proof D)

Given: WY bisects $\angle \mathrm{ZWX}$
$\angle \mathrm{Z} \cong \angle \mathrm{X}$
Prove: $\triangle \mathrm{WYZ} \cong \Delta \mathrm{WYX}$


## Proof E)

Given: JK || MN
L is the midpoint of KN
Prove: $\triangle \mathrm{JLK} \cong \triangle \mathrm{MLN}$


## Proof F)

XZ bisects $\angle \mathrm{WXY}$
$\angle \mathrm{XWZ} \cong \angle \mathrm{XYZ}$


Given: $\overline{\mathrm{DG}}$ bisects $\angle \mathrm{AGC}, \angle \mathrm{GCD} \cong \angle \mathrm{GAD}$ Prove: $\triangle \mathrm{GCD} \cong \triangle \mathrm{GAD}$


## Proof H)

Given :HL bisects JK,
$\angle \mathrm{H} \cong \angle \mathrm{L}$
Prove: $\triangle \mathrm{JHI} \cong \Delta \mathrm{LKI}$


Proof I) (*Challenge proof) Web PowerPoint Solution


| Think Pair Share: |
| :--- |
| Is the following statement true or false? Explain your answer |
| "ANY TWO TRIANGLES THAT CAN BE PROVEN CONGRUENT BY |
| ANGLE SIDE ANGLE CAN ALSO BE PROVEN CONGRUENT BY ANGLE |
| ANGLE SIDE" |
| Explanation: |
|  |

# Angle Angle Side <br> Worksheet and Activity 

This worksheet contains about 9 Angle Angle Side Sheets including a challenge proof and a Think Pair Share (at the end)

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