

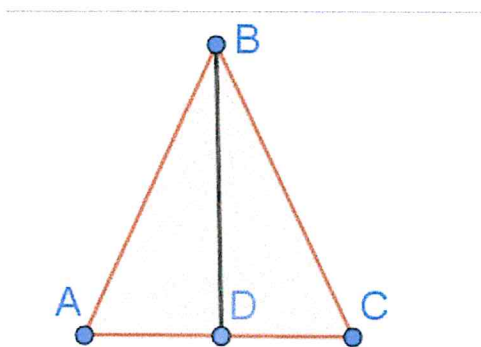
Applying Deductive Reasoning (please don't write on this page)

Create a structured argument to convince deductively:

"If a triangle is isosceles, then its base angles are congruent."

(we investigated inductively to write and apply this statement as C-18).

Use "tiles" from paper clip to fill in the blanks.



Given: Isosceles  $\triangle ABC$  with  
 $\overline{AB} \cong \overline{CB}$  and angle bisector  $\overline{BD}$

Show:  $\angle A \cong \angle C$

What	Why
------	-----

1)  $\overline{AB} \cong \overline{CB}$

?

2)  $\overline{BD}$  is an angle bisector

?

3) ?

Definition of angle bisector

4) ?

Shared Side

5)  $\triangle ABD \cong \triangle CBD$

?

6) ?

Corresponding parts are congruent

Therefore, if a triangle is isosceles, then its ? are congruent.

After discussing and arranging missing parts of the structured argument (2-column proof), practice explaining the argument verbally with a "persuasive argument."

Then copy the entire proof into your in-class section of your notebook. Now try the fill-in-the-blank proof on the screen (in-class section). Copy all parts.

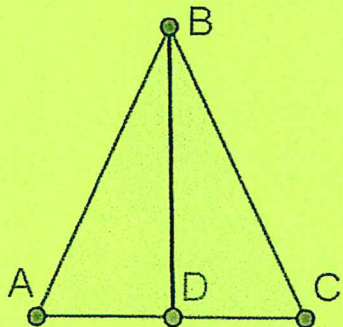
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What	Why
1) $\overline{AB} \cong \overline{CB}$	Given
2) $\overline{BD}$ is an angle bisector	Given
3) $\angle ABD \cong \angle CBD$	Definition of angle bisector
4) $\overline{BD} \cong \overline{BD}$	Shared Side
5) $\triangle ABD \cong \triangle CBD$	SAS shortcut
6) $\angle A \cong \angle C$	Corresponding parts are congruent

Therefore, if a triangle is isosceles, then its Base angles are congruent.

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