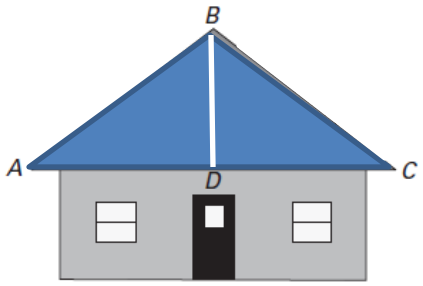
Name _____ Unit 1Bc Performance Task

The figure to the right shows a cabin at a campground.

Use the figure to answer the questions below



GIVEN: $\overline{AB} \cong \overline{BC}$
$\overline{BD} \perp \overline{AC}$
$m\angle ACB = 33^{o}$

a. Name each triangle in the figure and then classify it by its angles and by its sides.

b. Prove that ΔABD is congruent to ΔCBD.

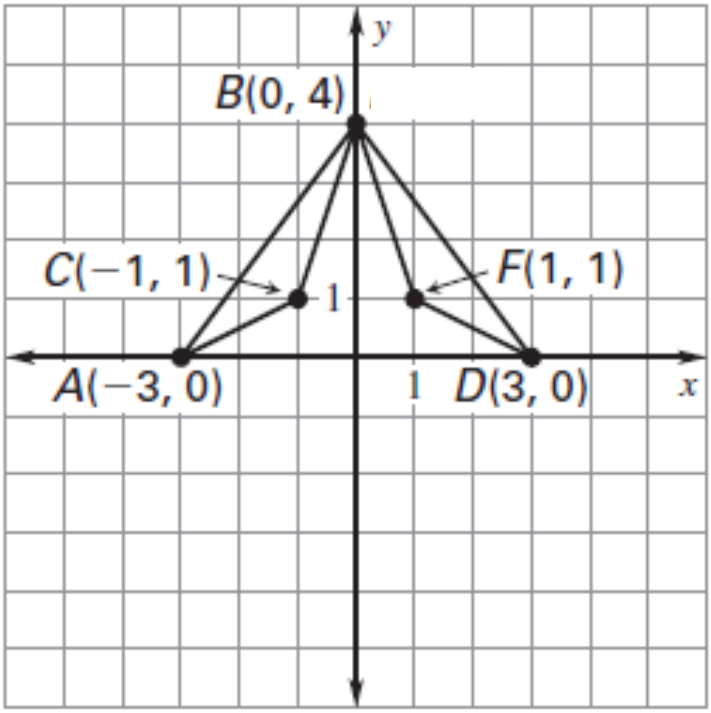
Statements	Reasons
1) $\overline{AB} \cong \overline{BC}$ $\overline{BD} \perp \overline{AC}$	

c. Identify all pairs of congruent corresponding parts in ΔABD and ΔCBD.

Sides	Angles
$\cong$	$\cong$
$\cong$	$\cong$
$\cong$	$\cong$

d. Suppose that $m\angle BAD = 33^{\circ}$, find $m\angle ABC$

e. A logo to be placed on the cabin is being designed using the triangles to the right. Using the coordinates, the distance formula and the SSS postulate, prove that the triangles are congruent.



f. Mrs. Dias decided to connect points A and D to create a different design. What is the best classification for the new triangle created - ΔABD?

How do you know?