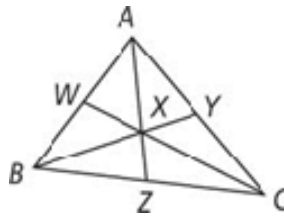


Geometry Week 17 Monday

Warm-up

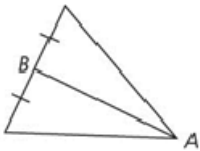
In  $\triangle ABC$ ,  $X$  is the centroid.

1. If  $CW = 15$ , find  $CX$  and  $XW$ .
2. If  $BX = 8$ , find  $BY$  and  $XY$ .
3. If  $XZ = 3$ , find  $AX$  and  $AZ$ .

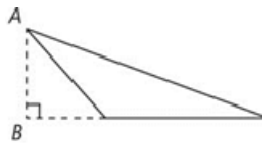


Is  $\overline{AB}$  a median, an altitude, or neither? Explain.

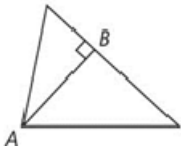
4.



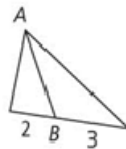
5.



6.



7.



Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

# 5-5 Think About a Plan

Indirect Proof

Write an indirect proof.

**Given:**  $\triangle XYZ$  is isosceles.

**Prove:** Neither base angle is a right angle.

1. What is the first step in writing an indirect proof?

2. Write the first step for this indirect proof.

3. What is the second step in writing an indirect proof?

4. Find the contradiction:

a. How are the base angle measures of an isosceles triangle related?

b. What must be the measure of each base angle?

c. What is the sum of the angle measures in a triangle?

d. If both base angles of  $\triangle XYZ$  are right angles, and the non-base angle has a measure greater than 0, what must be true of the sum of the angle measures?

e. What does your assumption contradict?

5. What is your conclusion?