Name _____   Date _____

1. Draw triangles that fit the following classifications.  Use a ruler and protractor.  Label the side lengths and angles.

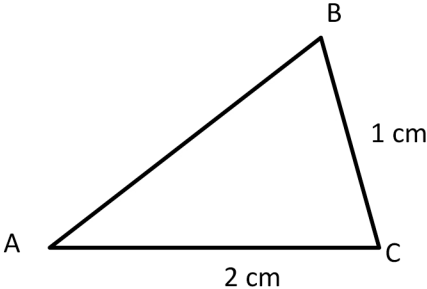   a. Right and isosceles                    b. Right and scalene

   c. Obtuse and isosceles                   d. Acute and scalene

2. Draw all possible lines of symmetry in the triangles above.  Explain why some of the triangles do not have lines of symmetry.
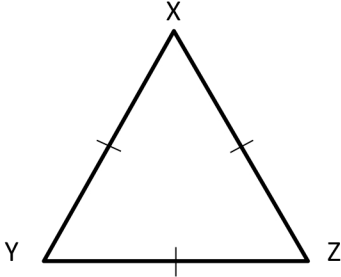
Are the following statements true or false?  Explain.

3.  $\triangle ABC$ is an isosceles triangle. $\overline{AB}$ must be 2 cm.  True or False?
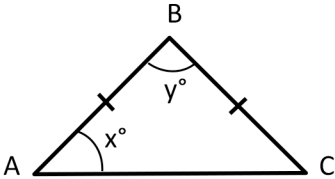
B

1 cm

A

2 cm

C

4.  A triangle cannot have both an acute angle and a right angle.  True or False?

5.  $\triangle XYZ$ can be described as both equilateral and acute.  True or False?

X

Y

Z

6.  A right triangle is always scalene.  True or False?

Extension:  In $\triangle ABC$,  x° = y°.  True or False?

B

y°

x°

A

C

Answer Key

1. Triangles drawn accurately; side lengths and angles labeled

2. Lines of symmetry accurately drawn in 1(a) and 1(c); explanations will vary.

3. True; explanations will vary.

4. False; explanations will vary.

5. True; explanations will vary.

6. False; explanations will vary.

Extension: False; explanations will vary.