



**3-65. See below.**

- a.  $x = 20$  mm
- b.  $w = 91$  mm

**3-66. See below.**

- a. Impossible: can be rejected using Triangle Inequality or the Pythagorean Theorem.
- b. Possible
- c. Impossible: rejected because the sum of the angles is  $179^\circ$ .

**3-67. See below.**

- a.  $\frac{8}{12}$
- b.  $\frac{4}{8}$

**3-68.** This reasoning is incorrect. Students could rewrite “it is raining” in the lower left oval, and “Andrea’s flowers must be closed up” in the right oval.

**3-69. See below.**

- a. Reflection, rotation, and translation (students may not include translation, since it can be avoided with a specially-chosen point of rotation.)
- b. Rotation and translation
- c. Rotation, dilated by factor of 2, and translation.
- d. Rotation, reflection, and reduced by zoom factor of 0.5 (students may also write translation, or multiple reflections instead of rotation and reflection.)

**3-70. See below.**

- a. Possible
- b. Not possible because the sum of the measures of an obtuse and right angle is more than  $180^\circ$ .
- c. Not possible because a triangle with sides of equal length obviously cannot have sides of different lengths.
- d. Possible