6-4. See below.

a.   Alternate interior angles.

b.   Vertical angles.

c. $\angle u$ & $\angle z$, $\angle s$ & $\angle x$, $\angle v$ & $\angle w$, and $\angle t$ & $\angle y$

6-5. See below.

a.   They are similar by SAS~.

b.   Yes, because they are similar and the corresponding sides have a ratio of 1.

6-6. $3x+1 \ +52 \ =180$, $x=\frac{127}{3}=42.33$

6-7. See below.

a.   8 cm

b.   ≈ 14.97 ft

c.   ≈ 15.2 in.

6-8. 1a and 1b: statements *ii* and *iv*
          2: The cupcakes are burned,
          3: The fans will not buy the cupcakes because they are burned,
          4: The team will not have enough money for uniforms.

6-9. See below.

a. $\frac{3}{4}$ or 75%

b. $\frac{3}{20}$ or 15%

c.   1 or 100%

d.   (b) is an intersection, and (c) is a union.

6-10. A