Simplifying Radicals and Solving Radical Equations Review

Directions: Simplify the following radicals.

1.
$$\sqrt{360}$$

2.
$$\sqrt{2}(\sqrt{10}+6)$$

3.
$$\sqrt{\frac{5}{9}}$$

4.
$$\frac{\sqrt{2}}{\sqrt{3}}$$

Solve the equations:

5.
$$\sqrt{x} + 2 = 9$$

6.
$$\sqrt{x+1} = 4$$

Find the missing side in the triangle. If the side does not simplify to a whole number, leave your answer as a simplified radical.

7.
$$a = 5$$
, $b = 12$, $c = ?$

8.
$$a = ?$$
, $b = 9$, $c = 15$