5.5b - Inequalities in one Triangle

1) Last moment questions about 5.3 or 5.4
2) Quiz 5.4
3) Notes 5.5c : Idea of Indirect Proof
4) Review of Simplifying Radicals
5) HW Summary 5.a
5.5c - Indirect Proof

Idea of Indirect Proof
Show that the opposite cannot happen

a) assume the opposite of the conclusion is true
b) use direct reasoning to show that part a) leads to a contradiction
c) conclude since the assumption a) is false, that the original conjecture is true

Example #5: Write an indirect proof of the following statement

A scalene triangle cannot have two congruent angles

Assume that a scalene can have two congruent angles. If a triangle has two congruent angles, then it has two congruent sides. If a triangle has two congruent sides, then it can’t be scalene (contradiction) since the opposite of the statement can’t happen, the original must be true.
A radical expression is completely simplified when
a) the number inside the radical is as small as possible
5.5d - Simplifying Radicals

A radical expression is completely simplified when

a) the number inside the radical is as small as possible

b) there are no fractions inside the radical

c) there are no radicals in a denominator
Example #1: Simplify the following radicals (6 of them)

Assignment (Due Monday, January 12)

1) Pg. 336b #36-39, 16, 17

2) Pg. 346 #1-5

3) Make sure that first part of pg. 336 is already complete