Lesson 7-3 Similar Triangles

Two triangles are similar if their angles are the same:

Are these triangles similar?

How many angles do you need to prove similarity?

65°

55°

65°

55°

Similar Triangle Tests:

* AA: Two pairs of angles are congruent.
* SSS: The measures of the corresponding sides of two triangles are proportional.

18 in

F

A

9 in

14 in

D

5 in

E

10 in

C

B

7 in

* SAS: Two sides are proportional and the included angles are congruent.

F

E

D

C

B

A

10 in

14 in

7 in

5 in

A

D

Ex1)

E

1. AB|| DC 1)

B

C

2)$∠ABE ≅$ $∠CDE$ 2)

Given: AB|| DC 3)$∠AEB ≅$ $∠DEC$ 3)

Prove: Δ*BAE* ~ Δ*DCE* 4) Δ*BAE* ~ Δ*DCE* 4)

Ex2) Determine whether each pair of triangles is similar. Justify your answer.

1.  b)

Ex3) Each pair of triangles is similar. Find x and y.

1. 
2. 