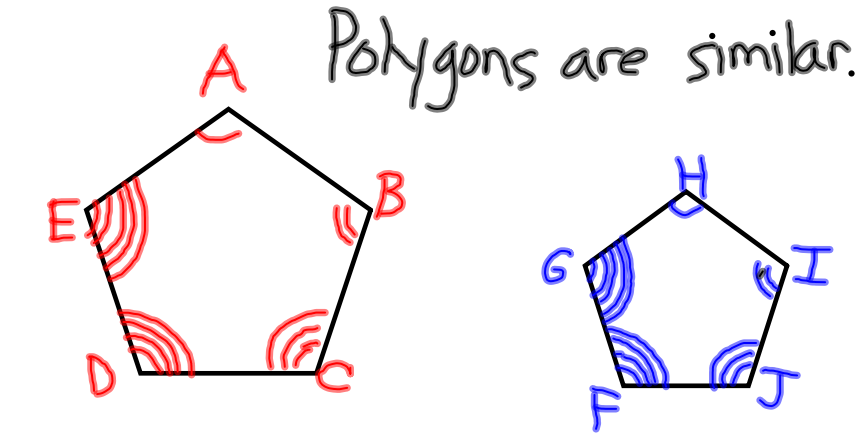
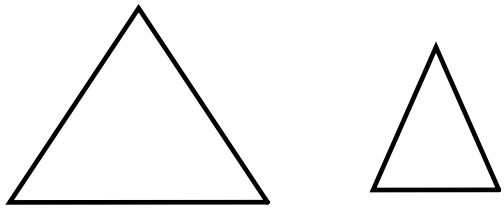


Earlier, we learned about tests to determine whether triangles were congruent...

There are also tests that determine whether triangles are similar.

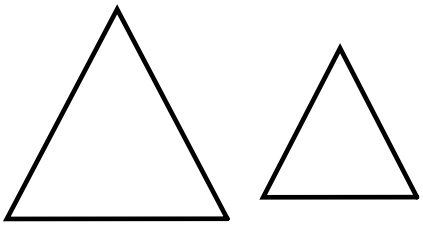
AA Similarity

If 2 ∠'s of 1 △ are ≅ to 2 ∠'s of another △, then the 2 △'s are ~



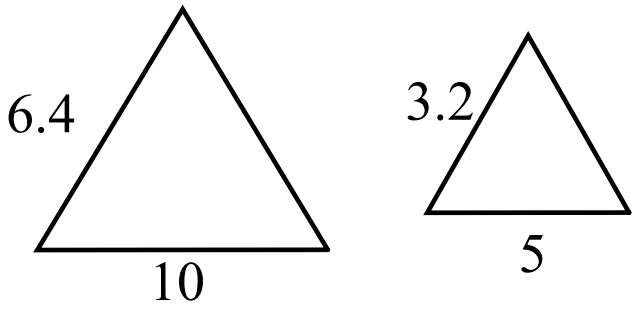
SSS Similarity

If the measures of the corresponding sides of 2 △'s are proportional, then the △'s are similar.



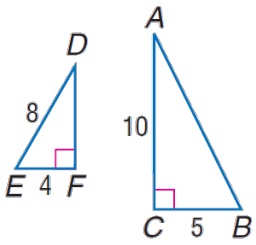
SAS Similarity

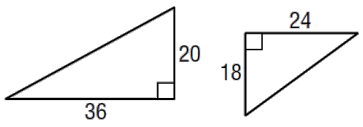
If the measures of 2 sides of a $\triangle$ are proportional to the measures of 2 corresponding sides of a 2nd $\triangle$ and the included $\angle$'s are $\cong$, then the $\triangle$'s are similar.

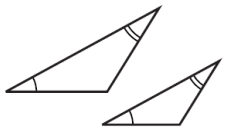


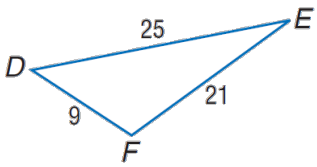
Similarity of $\triangle$'s is symmetric, reflexive, and transitive.

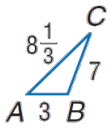
Determine whether each pair of triangles is similar. Justify your answer.

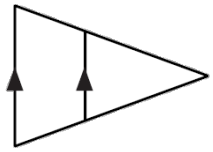


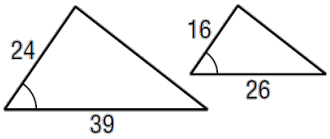




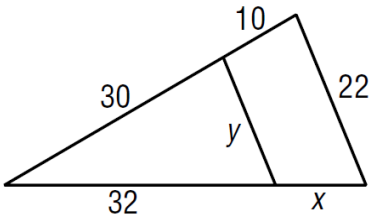


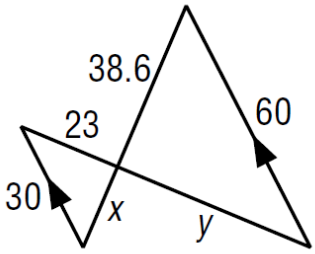


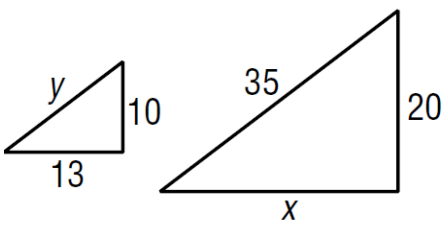




Each pair of triangles is similar. Find the values of *x* and *y*.

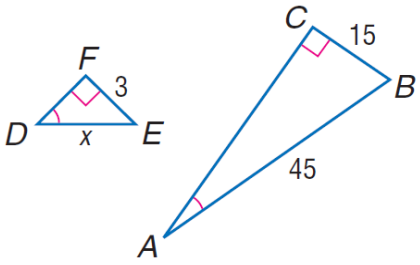




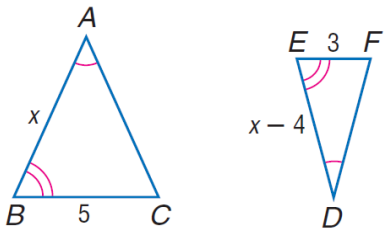


Identify the similar triangles. Find x and the measure of the indicated side(s).

$\overline{DE}$



$\overline{AB}$ and $\overline{DE}$



A cell phone tower casts a 100-foot shadow. At the same time, a 4 foot 6 inch post near the tower casts a shadow of 3 feet 4 inches. Find the height of the tower.
(Draw a picture to model the situation.)