2C Similarity CDA Review

1. In the diagram of $∆ABE$ and $∆DBC$, $\overbar{AD}$ and $\overbar{CE}$ intersect at B and $∠EAB≅∠CDB$.



What statements prove these two triangles are similar by AA?

1. Given $∆ABC\~∆DEF$ such that $\frac{AC}{DF}=\frac{2}{3}$. What are all of the other ratios and congruent angles?
2. If $∆ABC \~ ∆JKL$, $m∠A=59°, and m∠B=63°$, what is $m∠L$?
3. Solve for x.
4.  Given that $∠ABC≅∠AED$, determine how these two triangles are similar.
5. Two ladders are leaned up against a wall such that they make the same angle with the ground. The 12’ ladder reaches 9’ up the wall. How much further up the wall does the 21’ ladder reach?
6.  Determine the scale factor and whether it is an enlargement or reduction.
7. Are these two triangles similar, and if so how?



1. Are these two triangles similar, and if so how?



1. Solve for x, y, and z.



1. Solve for the missing side. The triangles are similar.



1. The side lengths of $∆ABC$ are 2, 5, and 8 and the sides of $∆RST$ are 4, 10, and 18 respectively. Are the two triangles similar and if so, which postulate or theorem can be used to prove the triangles similar?
2. Find the value of x if the two triangles are similar.



1. Solve for x. Assume the two triangles are similar.



1. The following two triangles are similar. Solve for x.



1. Similar triangles are triangles that are the same shape, but not the same size. What ways can triangles be proven similar?
2. A line parallel to a triangle’s side splits one side into lengths of 6 and 2. The other side is split into lengths of 9 and x. What is the value of x that would prove the parallel line divides the sides proportionally?
3. The triangles below are similar. Write the similarity statement and determine the value of x..

m$∠$A = 35o

m$∠$C = m$∠$E = 102o

m$∠$B = 43o

CB = x + 2, AC = 5, DE = 10, EF = 6

1. Determine if the triangles shown in the figure are similar. If so, state the reason.
2. Are the following polygons similar?

a.



b.



c.

1. Solve for x.

