### 3.1.2 - Similarity Homework

1. Look at the two similar shapes below. Which sides correspond? Write common ratios with the names of sides and lengths.


Find the hypotenuse of each of the triangles above. Is the ratio of the hypotenuses equal to the ratios you found above?
2. Multiply the expressions below. Then simplify if possible.
a. $2 x(3 x-4)$
b. $(x+3)(2 x-5)$
c. $(2 x+5)(2 x-5)$
d. $x(2 x+1)(x-3)$
3. Examine the relationships in the diagram below. Then solve for $x$ and $y$, if possible. Justify your work using angle relationships.


