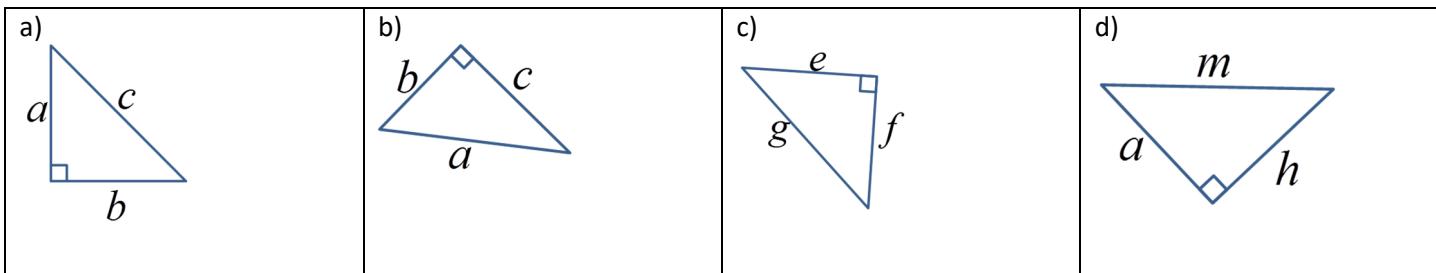


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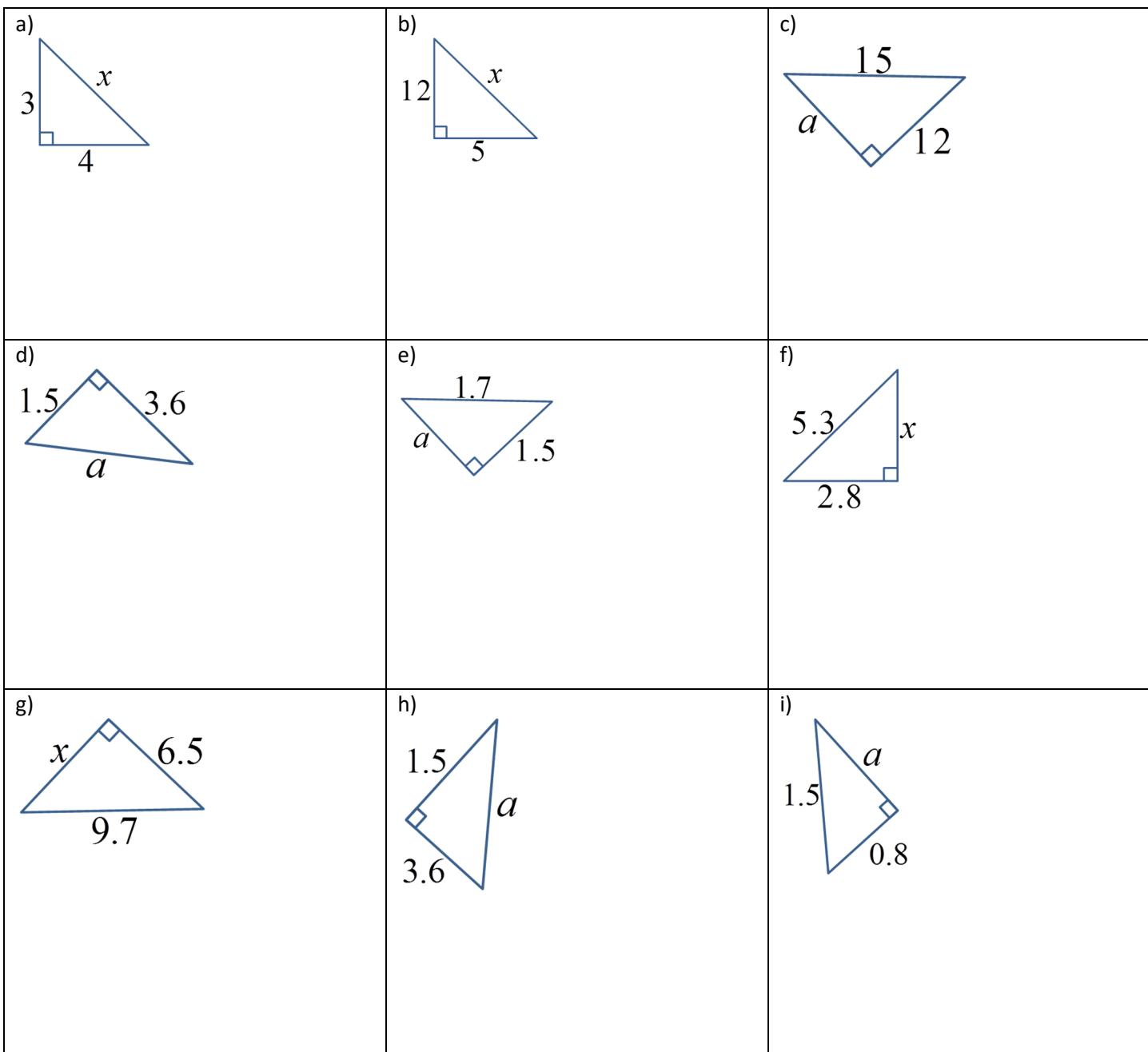
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**Math 9 Homework Assignment 1.2b Pythagorean Theorem:  $a^2 + b^2 = c^2$** 

1. For each of the following triangles, indicate which side is the hypotenuse:



2. Given each of following triangles, find the length of the missing side. Show all your work:



3. In order to use the Pythagorean theorem, what kind of a triangle must it be?

4. A rectangle is 15cm wide and 24cm long. What is the length of the diagonal?

5. If jack runs 25meters north and Susan runs 60meters west, how far are they apart?

6. A boat is sailing South at 3km/hr and cruiser is sailing East at 9km/hr. What is the distance between these two boats in 3.5hours?

7. A bug is walking on the surface of a box from one corner to the opposite corner. The box is 8cm in width, 10cm in length, and 6cm in height. What is the shortest distance the bug should travel from the two corners?  
(NOTE: you can't go through the box)

