

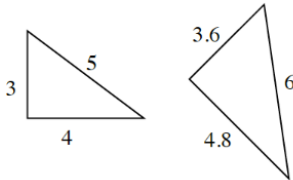
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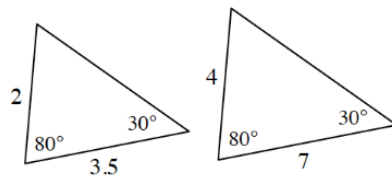
Homework 2.3.2 & 2.3.3

1. Determine which similarity conditions (AA~, SSS~, or SAS~) could be used to establish that the following pairs of triangles are similar. List as many as you can.

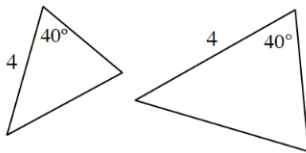
a.



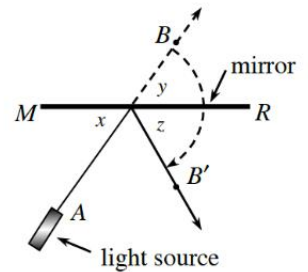
b.



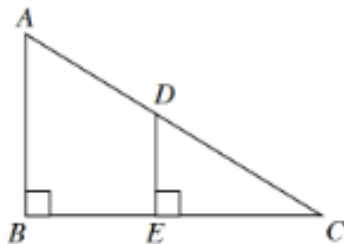
c.



2. A laser light is pointed at a mirror as shown at right. If $\angle x$ measures 48° , what are the measures of $\angle y$ and $\angle z$? Justify your reasons.

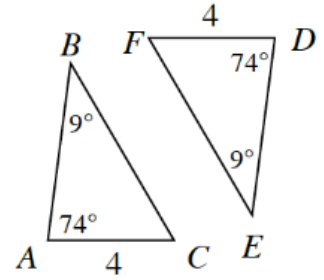


3. Are the triangles below similar? If so, write a flowchart proof that justifies your conclusion. If not, explain how you know.



4. Use the triangles at right to answer the following questions. Are the triangles at right similar?

a. How do you know if they are similar? Show your reasoning in a flowchart.



b. Examine your work from part (a). Are the triangles also congruent? Explain why or why not.

5. Write a converse for each conditional statement below. Then, assuming the original statement is true, decide if the converse must be true or not.

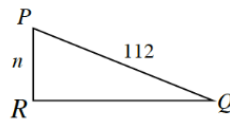
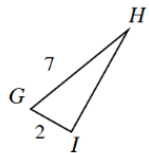
a. If the cat knocks over the lamp, then it will run away frightened.

b. If a standard six-sided dice is rolled, then the probability of getting a 3 is $\frac{1}{16}$.

c. If a triangle has a 90° angle, then it is a right triangle.

6. Solve for the missing lengths. Show all work.

a. $\triangle GHI \sim \triangle PQR$



b. $\triangle ABC \sim \triangle XYZ$

