Math Practice - Grade 8

M9 Angles, triangles, transversals - Similar triangles by angle-angle

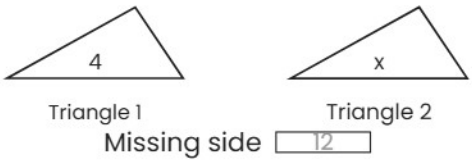
M9 8.G.A.5

Name: _____ Date: _____

Are the triangles similar by angle-angle? Circle Yes or No. If they are similar, find the missing side.

Example: Two triangles are similar by angle-angle. The first triangle has a side of length 4. The matching side in the second triangle is 3 times as long. Find the missing side.

How: Two triangles are similar when two pairs of angles match. The third pair then matches too, because all three angles add to 180 degrees.



Missing side 12

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1 **The first triangle has angles 23, 32, and 125 degrees. The second triangle has angles 23 and 44 degrees. Are the triangles similar by angle-angle?**

Yes No

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2 **The first triangle has angles 96, 38, and 46 degrees. The second triangle has angles 96 and 38 degrees. Are the triangles similar by angle-angle?**

Yes No

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Name: _____ Date: _____

Are the triangles similar by angle-angle? Circle Yes or No. If they are similar, find the missing side.

Example: The first triangle has angles 72, 75, and 33 degrees. The second triangle has angles 72 and 82 degrees. Are the triangles similar by angle-angle?

How: Two triangles are similar when two pairs of angles match. The third pair then matches too, because all three angles add to 180 degrees.

Yes (No)

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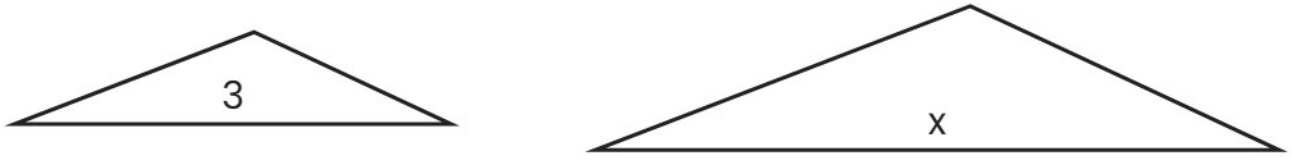
1 **Two triangles are similar by angle-angle. The first triangle has a side of length 3. The matching side in the second triangle is 2 times as long. Find the missing side.**



Triangle 1 Triangle 2

Missing side ☐

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2 **Two triangles are similar by angle-angle. The first triangle has a side of length 3. The matching side in the second triangle is 3 times as long. Find the missing side.**



Triangle 1 Triangle 2

Missing side ☐

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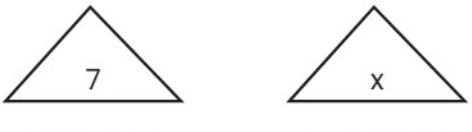
Name: _____ Date: _____

Are the triangles similar by angle-angle? Circle Yes or No. If they are similar, find the missing side.

Example: Two triangles are similar by angle-angle. The first triangle has a side of length 7. The matching side in the second triangle is 3 times as long. Find the missing side.

How: Two triangles are similar when two pairs of angles match. The third pair then matches too, because all three angles add to 180 degrees.



Triangle 1 Triangle 2

Missing side 21

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1 **Two triangles are similar by angle-angle. The first triangle has a side of length 6. The matching side in the second triangle is 2 times as long. Find the missing side.**



Triangle 1 Triangle 2

Missing side ☐

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2 **The first triangle has angles 80, 21, and 79 degrees. The second triangle has angles 80 and 21 degrees. Are the triangles similar by angle-angle?**

Yes No