



Name: \_\_\_\_\_

Date: \_\_\_\_\_

## Definitions Of Similarity

*Solve for x. Show your work.*

1. {Triangle ABC has sides } 3, 4, 5. { Triangle DEF has sides } 9, 12, 15. {Are they similar? If so, find the scale factor.}
2. {Two triangles each have angles of }  $56^\circ$  { and }  $77^\circ$ . {Are they similar? By what criterion?}
3. {Triangle ABC has sides } 3, 4, 5. { Triangle DEF has sides } 9, 12, 15. {Are they similar? If so, find the scale factor.}
4. {Two triangles each have angles of }  $53^\circ$  { and }  $78^\circ$ . {Are they similar? By what criterion?}
5. {Triangle ABC has sides } 3, 4, 5. { Triangle DEF has sides } 6, 8, 10. {Are they similar? If so, find the scale factor.}
6. {Two triangles each have angles of }  $54^\circ$  { and }  $67^\circ$ . {Are they similar? By what criterion?}
7. {Triangle ABC has sides } 3, 4, 5. { Triangle DEF has sides } 9, 12, 15. {Are they similar? If so, find the scale factor.}
8. {Two similar triangles have scale factor } 3. { If one side is } 7 { in the smaller triangle, what is the corresponding side in the larger triangle?}



## Definitions Of Similarity – Answer Key

1. {Triangle ABC has sides } 3, 4, 5. { Triangle DEF has sides } 9, 12, 15. {Are they similar? If so, find the scale factor.}

Yes, scale factor = 3

2. {Two triangles each have angles of }  $56^\circ$  {and }  $77^\circ$  {Are they similar? By what criterion?}

3. {Triangle ABC has sides } 3, 4, 5. { Triangle DEF has sides } 9, 12, 15. {Are they similar? If so, find the scale factor.}

Yes, scale factor = 3

4. {Two triangles each have angles of }  $53^\circ$  {and }  $78^\circ$  {Are they similar? By what criterion?}

5. {Triangle ABC has sides } 3, 4, 5. { Triangle DEF has sides } 6, 8, 10. {Are they similar? If so, find the scale factor.}

Yes, scale factor = 2

6. {Two triangles each have angles of }  $54^\circ$  {and }  $67^\circ$  {Are they similar? By what criterion?}

7. {Triangle ABC has sides } 3, 4, 5. { Triangle DEF has sides } 9, 12, 15. {Are they similar? If so, find the scale factor.}

Yes, scale factor = 3

8. {Two similar triangles have scale factor } 3. { If one side is } 7 { in the smaller triangle, text{{what is the corresponding side in the larger triangle?}}