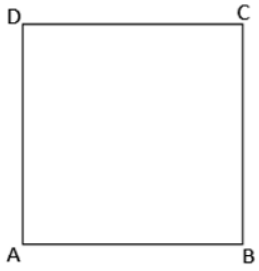
Special Triangles 3 – Special Angles 8.03

1. Given a square ABCD with a side of 6 units, label the measures of the angles and sides on the drawing. Then draw the diagonal AC.



∠CAB = _____ ∠B = _____ ∠BCA = _____

Use the Pythagorean Theorem to find AC as a simplified radical.

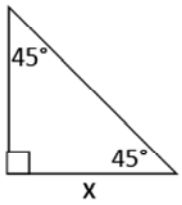
AC = _____

2. Repeat using a side of 4 units

AC = _____

3. Repeat using a side of x units.

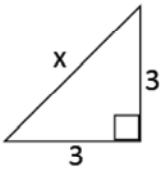
AC = _____



4. Using what you have learned above, label the other two sides of the isosceles right triangle at the right in terms of x.

Now without using the Pythagorean Theorem, use relationships found above in order to find the missing sides in each 45-45-90 triangle:

5.



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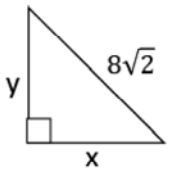

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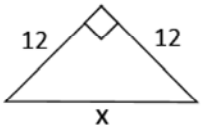

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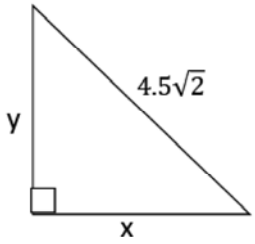

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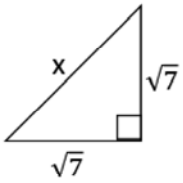

10.