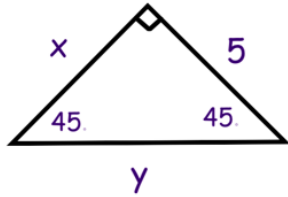
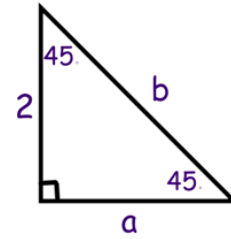


7.3 Special Right Triangles II 45-45-90

ex 1:



ex 2:



Every 45° - 45° - 90° has sides with the following relationship.

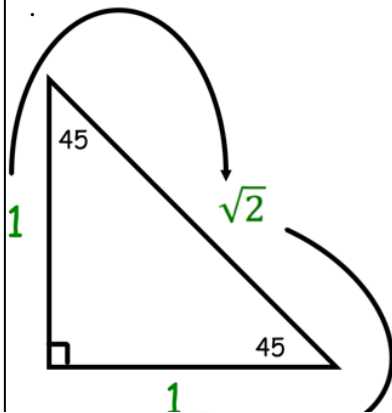
Ex 3: Missing Legs can be solved using similar triangles.

Find the missing lengths

Ex 4:

Ex 5:

SHORTCUT?



- *Always start with the short side (1) or get to that side first.
- *Multiply when going to a bigger side
- *Divide when going back to short side.

Ex 6:

Find the missing lengths

Ex 7:

Ex 8:

Let's take it up a notch! Find x .

Ex 9:

You try...find the missing legs in simplified radical form.

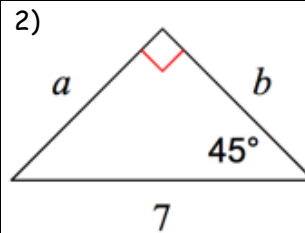
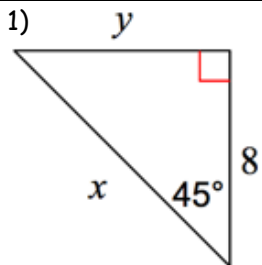
1)

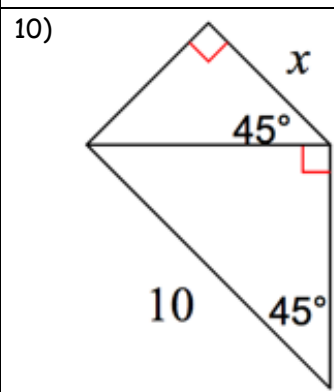
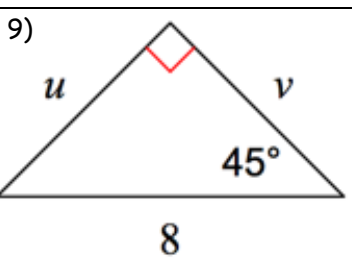
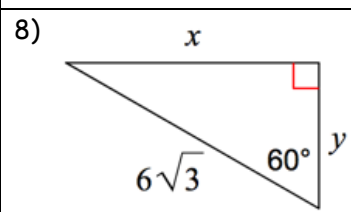
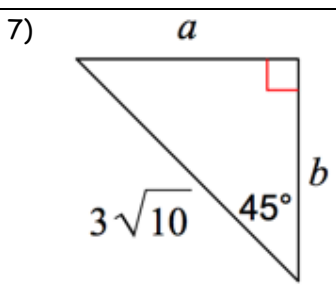
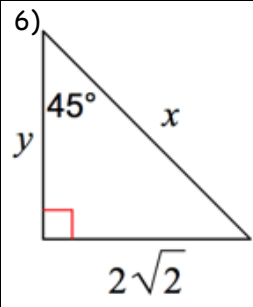
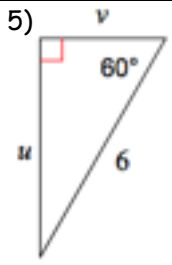
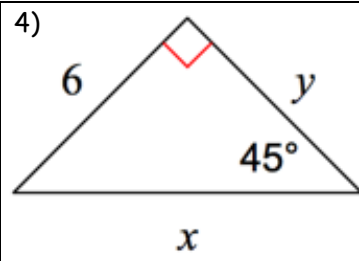
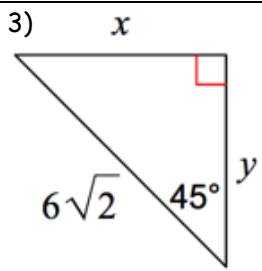
2)

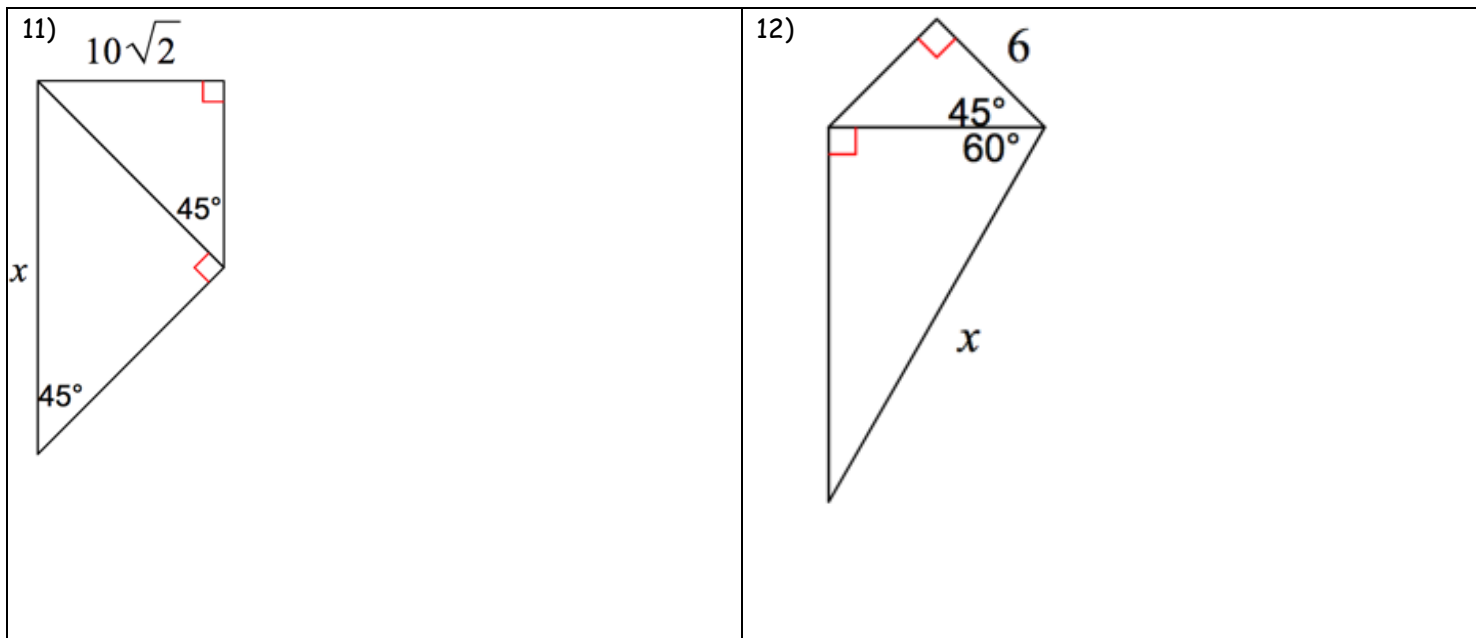
Summary:

7.3 Practice Problems

Directions: Find the missing side lengths. Leave your answers as radicals in simplest form.





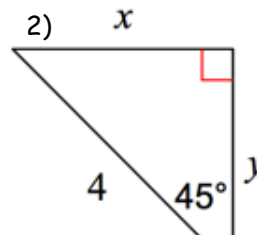
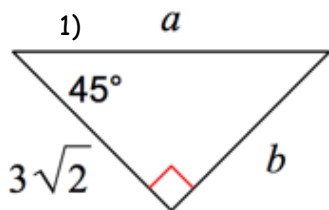


Algebra Review

<p>Solve: $2(x + 7) > 10$</p>	<p>Solve: $\frac{3x+5}{2} \geq 10$</p>	<p>Factor: $f^2 - 10f + 25$</p>
<p>Factor: $2h^2 + 17h + 21$</p>	<p>Graph: $2x + 3y = 15$</p>	<p>Graph: $9x + 3y = 6$</p>

7.3 APPLICATION and EXTENSION

Directions: Find the missing sides.



3) Spiderman is testing out how far he can sling his web. He positions himself on the ground and shoots his web to the top of a building. The angle between the webbing and the ground forms a 45 degree angle. He knows the webbing will shoot 450 feet.

a) Draw AND label a picture of Spidey slinging his web. How tall is the building.



b) Spidey positions himself to sling up to a new building. This time the angle between the ground and his webbing forms a 60 degree angle. Draw and label a picture of Spidey slinging his web. How tall is this building.



c) Which building is taller and by how much?

4) Which has an area that is greater, a 30-60-90 triangle with hypotenuse of 4 or a 45-45-90 triangle with a hypotenuse of 4? (remember that for a triangle $A = .5bh$, where b and h are perpendicular to each other)