Geometry
Ch. 8-9A HW #6

Do work on separate paper.
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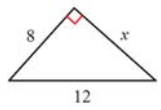
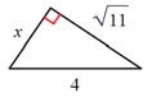
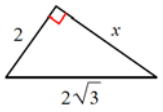
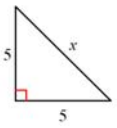
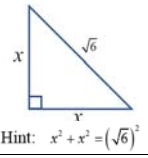
1. Use the Pythagorean Theorem to find the missing side of the triangle. Leave answers in simple radical form.

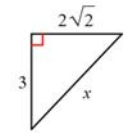
a) 

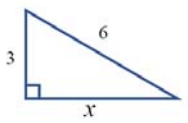
b) 

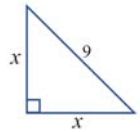
c) 

d) 

e) 

f) 

g) 

h) 

Jumbled Answers: $\frac{9\sqrt{2}}{2}$, $4\sqrt{5}$, $3\sqrt{3}$, $5\sqrt{2}$, $\frac{3\sqrt{2}}{2}$ $2\sqrt{2}$, $\sqrt{3}$, $\sqrt{17}$, $\sqrt{5}$, $2\sqrt{7}$

2. Rewrite each expression in simple radical form.

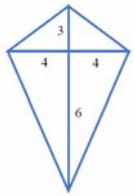
a) $\sqrt{18}$	b) $\sqrt{16}$	c) $\frac{3}{\sqrt{2}}$	d) $\frac{\sqrt{5}}{\sqrt{2}}$	e) $\sqrt{\frac{3}{4}}$
f) $\sqrt{5}\sqrt{5}$	g) $3\sqrt{5}\cdot3\sqrt{5}$	h) $2\sqrt{3}\cdot2\sqrt{3}$	i) $5\sqrt{2}\cdot5\sqrt{2}$	j) $\sqrt{2}\sqrt{6}$

Jumbled Answers: 5 50 $2\sqrt{3}$ $3\sqrt{2}$ $\frac{3\sqrt{2}}{2}$ $2\sqrt{5}$ $\frac{\sqrt{3}}{2}$ 45 $\frac{\sqrt{10}}{2}$ 12 4 $3\sqrt{3}$

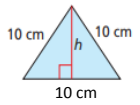
3. Problem Solving: Leave answers in simple radical form. No decimals.

a) A square has a side length of $\sqrt{10}$. How long is the diagonal?

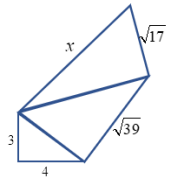
b) A kite has diagonal lengths as shown in the figure at right. Find the area and perimeter of the kite.



c) Find the area of the triangle.

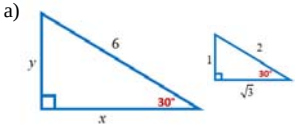


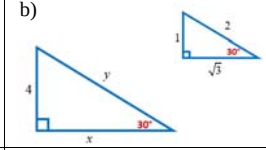
d) The three triangles are right triangles. Find the value of *x*.

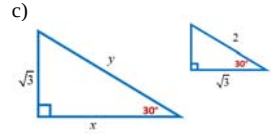


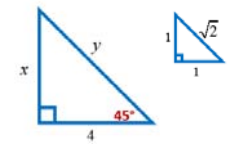
Jumbled Answers: $25\sqrt{3}$ $5\sqrt{2}$ 9 $4\sqrt{13}+10$ 36 55 $\sqrt{52}+5$

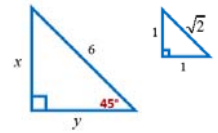
4. Confirm that each pair of triangles are similar. Use a proportion to find each variable.

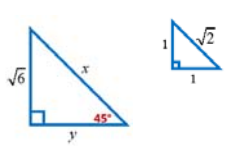
a) 

b) 

c) 

d) 

e) 

f) 

Jumbled Answers: 3, 3, 4, 8, $3\sqrt{2}$, $3\sqrt{2}$, $4\sqrt{2}$, $2\sqrt{3}$, $2\sqrt{3}$, $3\sqrt{3}$, $4\sqrt{3}$, $\sqrt{6}$ $2\sqrt{6}$

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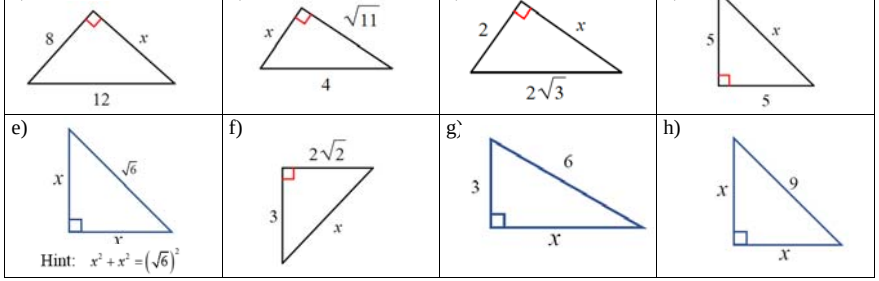

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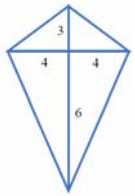

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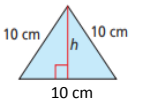

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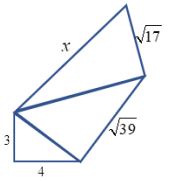

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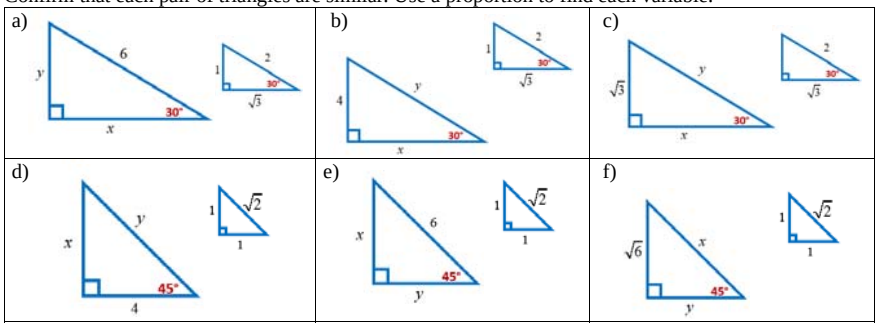

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