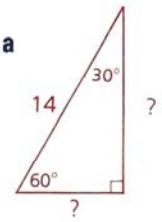
Name Ms. Kresovic, Adv Geo – ____, 12 March 2013

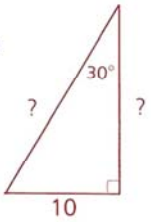
9.7 Homework: 1-10, 12

1 Find the two missing sides in each 30°-60°-90° triangle. Try to do the calculations in your head.

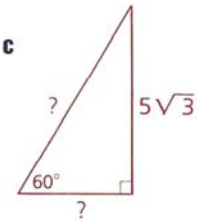
a



b



c



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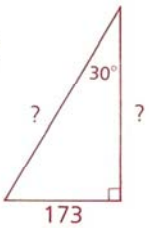
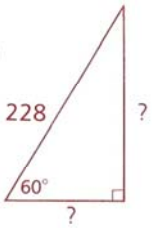


e



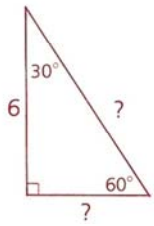
1a _____ 1d _____

1b _____ 1e _____

1c _____

2 Find the two missing sides of each triangle. (Hint: These are a bit harder, and you may want to put x, $x\sqrt{3}$, and 2x on the proper sides as shown in the sample problems.)

a



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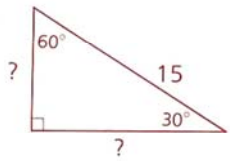

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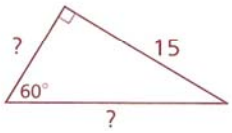

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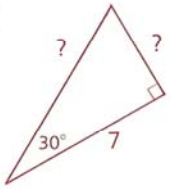
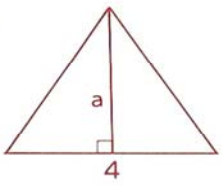


2a _____ 2c _____

2b _____ 2d _____

3 Solve for the variable in each of these equilateral triangles.

a



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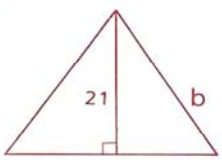

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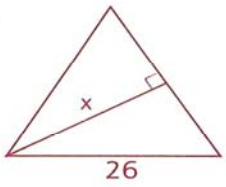
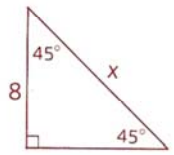


3a	3b	3c

4 Solve for the variable in each of these 45°-45°-90° triangles.

a



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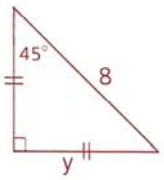
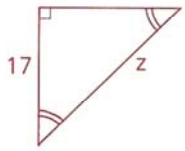
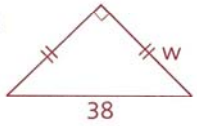


c



d

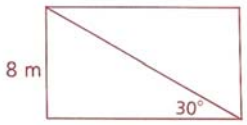


4a _____ 4c _____

4b _____ 4d _____

5 The perimeter of a square is 44. Find the length of a diagonal.

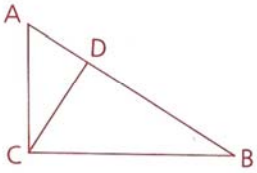
6 Find the length of the diagonal of the rectangle.



7 Find the altitude of an equilateral triangle if a side is 6 mm long.

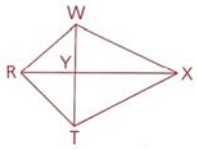
8 Given: $\overline{AC} \perp \overline{BC}$, $\overline{CD} \perp \overline{AB}$, $\angle B = 30°$, $BC = 8\sqrt{3}$

Find: CD



9 Given: TRWX is a kite ($\overline{TR} \cong \overline{WR}$ and $\overline{TX} \cong \overline{XW}$).
RY = 5, TW = 10, YX = 12

Find: **a** TR
b WX



10 a Find the ratio of the longer leg to the hypotenuse in a 30°-60°-90° triangle.

10

b Find the ratio of one of the legs to the hypotenuse in a 45°-45°-90° triangle.

12 a Find the coordinates of B.
b Find the slope of $\overleftrightarrow{OB}$.
c Find $\frac{AB}{OA}$. (In a trigonometry class, this ratio is called the *tangent* of angle BOA.)