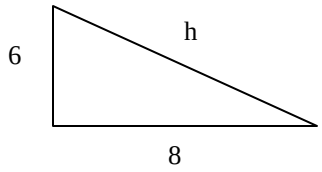
Name _____ Date _____

Practice Worksheet
Content Standard: Solve Equations & Inequalities
Student Learning Expectations: Integrate algebra and geometry in problems.

1. The triangle shown below has a height of 6 and a length of 8. What is the length of side h (the hypotenuse)?



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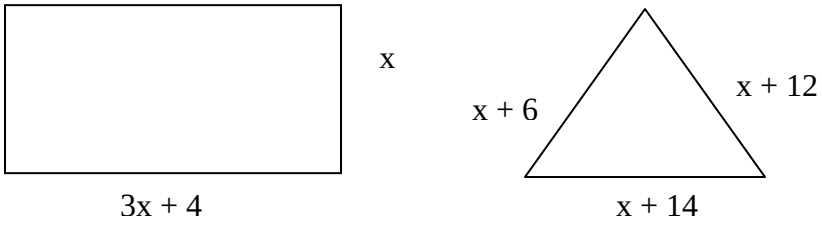
2. The rectangle and the triangle have the same perimeter.(Figures not drawn to scale) What is the value of x?



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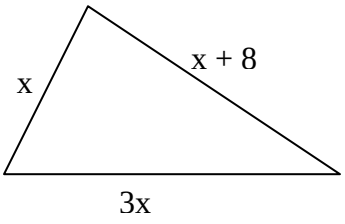
3. What expression represents the perimeter of the triangle pictured below?



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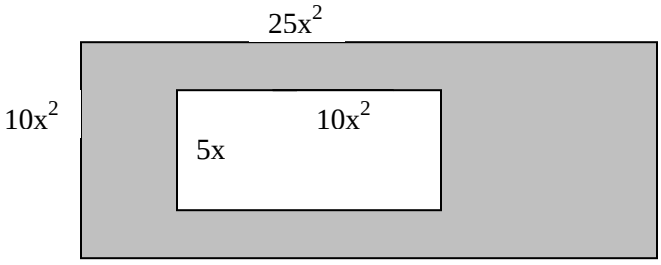
4. All figures shown below are rectangles. What is the area of the shaded region?



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5. A rectangle has a length that is 4 more than twice the width. What expression gives the area of the rectangle if w represents the width?

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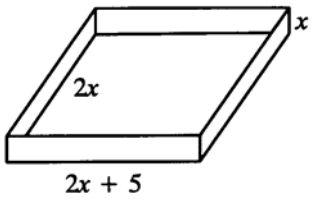
6. The plans for a box are shown.



(Not drawn to scale.)

a. The sum of the box's length, width, and height is 25 inches. Find the value of x. Show or explain all of your work even if you use mental math or a calculator.

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b. The outside of the box will be painted. Write an algebraic expression for the area of the base of the box (there is no lid). Show or explain all of your work even if you use mental math or a calculator.

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c. For heavy objects, the company will need to fit a support into the bottom of the box. The support will be installed along the diagonal of the base. Determine the length of the support. Show or explain all of your work even if you use mental math or a calculator.

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