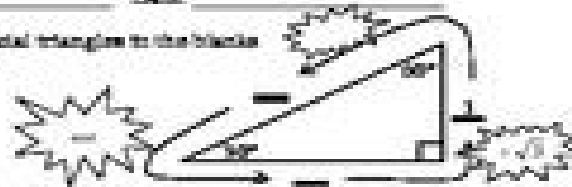Name: _____ Date: _____

Directions:

(I) Fill in the missing side lengths to the special triangles in the blanks.

(II) Then fill in the jagged explosion clouds to show what operation you each perform to go from side to another. For example, to go from the length of the side opposite the 60° angle to the length of the side opposite the 30° angle, you must divide by $\sqrt{3}$. For example, if the length of the side opposite the 60° angle was 6" (6 inches), then the length of the side opposite the 30° angle would be:

$$6 \div \sqrt{3} = \frac{6}{\sqrt{3}} = \frac{6}{\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}} = \frac{6\sqrt{3}}{3} = 2\sqrt{3}".$$

(III) Complete each exercise below by finding the value of x. Then put the letter (or symbol) of the exercise above its corresponding answer in the box above it in the mystery sentence at the bottom of the page. See a secret message! (Figures are not drawn to scale.)