PRACTICE

Find the value of $x$. Give your answer in simplest radical form.

1. 

2. 

3. 

4. 

5. 

6. 

7. 

8. 

9. 

10. **Error Analysis** Two students were asked to find the value of $x$ in the figure at right. Which student's work is correct? Explain the other student's error.

**Roberto's Work**

\[
\sin 60° = \frac{\sqrt{3}}{2}, \text{ but from the figure, } \sin 60° = \frac{x}{8}, \text{ so } \frac{\sqrt{3}}{2} = \frac{x}{8}.
\]

Multiplying both sides by 8 gives

\[8 \cdot \frac{\sqrt{3}}{2} = x, \text{ so } x = 4\sqrt{3}.
\]

**Aaron's Work**

In a 30°-60°-90° triangle, the side lengths are in a ratio of

\[1: \sqrt{3}: 2, \text{ so } x \text{ must be } \sqrt{3} \text{ times the length of } AB.
\]

Therefore,

\[x = 8\sqrt{3}.
\]