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NAME _____ DATE _____

Chapter 13 Review

Radical Roof

The staff at Monsoon High School stores its math textbooks in the storage buildings below. The books are evenly divided among all of the storage buildings. However, the rainy season is fast approaching and some of the storage buildings will leak when it rains. With your parent, help the staff of Monsoon High School find out which roofs will leak before the rains begin. Simplify the expressions on each building. If the simplified expression contains a radical sign (roof), then the storage building will not leak. If the expression does not contain a radical sign, then the building will leak. Mark the leaky buildings with a big X so the staff will know to move the textbooks out of those buildings.

Simplify each expression.

1. $\sqrt{64}$

2. $\sqrt{80x^2}$

3. $\sqrt{72ab^5c^2}$

4. $\frac{\sqrt{18}}{\sqrt{2}}$

5. $\frac{\sqrt{12}}{\sqrt{2}}$

6. $2\sqrt{5} + 3\sqrt{7} - 5\sqrt{5} + \sqrt{7}$

7. $3\sqrt{2} + \sqrt{5} - \sqrt{2} - \sqrt{5} - 2\sqrt{2}$

8. $\sqrt{3}(2 + \sqrt{3})$

9. $(2\sqrt{5} - 7)(\sqrt{5} + 6) - 5\sqrt{5}$

10. $\frac{5}{\sqrt{3} + 6}$

Answers are located on page 113.