Algebra 2

Chapter 8 Test Review

Simplify radicals by factoring.

1. $\sqrt{882}$

2. $\sqrt[3]{144}$

Add and subtract radicals.

3. $4\sqrt{18} - \sqrt{8}$

4. $\frac{2}{3\sqrt{2}} + \frac{\sqrt{2}}{6}$

Multiply radicals.

5. $(3 + 2\sqrt{3})(2 - \sqrt{3})$

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

7. $(3 - 6\sqrt{2})^2$

Divide radicals.

8. $\frac{14}{3\sqrt{2}}$

9. $\frac{7}{4 + \sqrt{2}}$

10. $\frac{5}{\sqrt[3]{5}}$

Solve radical equations.

11. $3\sqrt{x + 1} = 21$

13. $\sqrt{x + 2} = x + 2$

12. $\sqrt{x - 2} + 7 = 0$

14. $\sqrt{x - 3} - \sqrt{2x + 1} = 0$

Describe how a function has been transformed.

15. For the parent function $y = \sqrt{x}$, describe these transformations: a) $y = \sqrt{x - 4} + 2$

b) $y = 5 - \sqrt{x + 3}$

16. Write the function: Transform $y = \sqrt{x}$ a) Shift right 1 and flip over b) Shift down 3 and left 6