

Algebra 1  
**Radical Operations**

Name:  
 Date:

Period:

Perform the indicated operations. Leave your answers in radical form.

- |                                                                 |                                                    |                                         |                                            |
|-----------------------------------------------------------------|----------------------------------------------------|-----------------------------------------|--------------------------------------------|
| 1. $5\sqrt{6} - 3\sqrt{6}$                                      | 2. $7\sqrt[3]{2} + \sqrt[3]{2}$                    | 3. $\sqrt{12} + 6\sqrt{12}$             | 4. $2\sqrt{3} + 2\sqrt{3} - 5\sqrt{3}$     |
| 5. $10\sqrt[3]{8} - 6\sqrt[3]{8}$                               | 6. $\sqrt{3} \cdot \sqrt{5}$                       | 7. $\sqrt{6} \cdot \sqrt{3}$            | 8. $\sqrt[3]{25} \cdot \sqrt[3]{25}$       |
| 9. $-\sqrt{45} + 2\sqrt{20} - 2\sqrt{20}$                       | 10. $-2\sqrt[3]{4} + 4\sqrt[3]{32} - 6\sqrt[3]{4}$ | 11. $(-2\sqrt{35})(-\sqrt{10})$         | 12. $-2\sqrt{2} \cdot 5\sqrt{2}$           |
| 13. $-2\sqrt[3]{2} + 7\sqrt[3]{2} + 4\sqrt[3]{2} - \sqrt[3]{2}$ | 14. $-3\sqrt{24} + 2\sqrt{54} - \sqrt{18}$         | 13. $6\sqrt[3]{128} \cdot 3\sqrt[3]{5}$ | 14. $4\sqrt[3]{1000}$                      |
| 15. $\frac{\sqrt{12}}{\sqrt{4}}$                                | 16. $\frac{5\sqrt{4}}{3\sqrt{16}}$                 | 17. $\sqrt[3]{\frac{128}{2}}$           | 18. $\frac{4\sqrt[3]{54}}{6\sqrt[3]{125}}$ |
|                                                                 |                                                    |                                         | 19. $\frac{4\sqrt{5}}{4\sqrt{20}}$         |

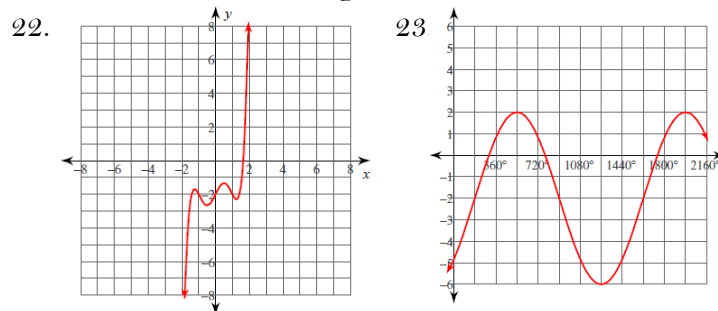
Graph each absolute value function.  
 State the domain and range.

20.  $f(x) = |x + 2| + 3$       21.  $g(x) = |x + 1| - 4$

x	-4	-3	-2	-1	0
y					

x	-3	-2	-1	0	1
y					

Determine whether each graph is a function.  
 State the domain and range.



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