Algebra 1
Ch 9A Review

Name: _____
Period: _____

Simplify.

1. $\sqrt{24}$
2. $\sqrt{200}$
3. $\sqrt[3]{162}$
4. $\sqrt[3]{24x^6y^{10}}$
5. $\sqrt{\frac{12}{9}}$
6. $\sqrt[3]{\frac{16}{27}}$
7. $\sqrt[3]{\frac{32}{1000}}$
8. $-4\sqrt{20}$
9. $\sqrt{104}$
10. $-\sqrt{54x^7y^4}$
11. $-2\sqrt{60}$
12. $3\sqrt{90}$
13. $\left(3\sqrt{2}\right)\left(\sqrt{6}\right)$
14. $\left(\sqrt{8}\right)\left(\sqrt{6}\right)$
15. $\frac{\sqrt{72}}{\sqrt{6}}$
16. $\frac{\sqrt{50}}{\sqrt{5}}$
17. $\left(6\sqrt{2}\right)\left(6\sqrt{18}\right)$
18. $\frac{\sqrt{7}}{\sqrt{63}}$
19. $\frac{24\sqrt{56}}{6\sqrt{7}}$

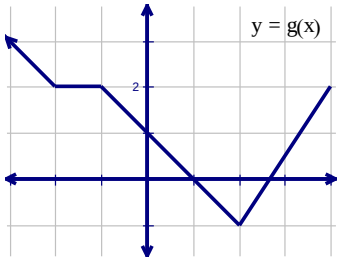
Perform the indicated operation. Leave your answer in radical form.

20. $8\sqrt{6}+\sqrt{6}$
21. $\sqrt[3]{135}-2\sqrt[3]{5}$
22. $4\sqrt{9}-3\sqrt{25}$
23. $3\sqrt[3]{16}-7\sqrt[3]{54}+12\sqrt[3]{2}$
24. $\sqrt{18}\cdot\sqrt{14}$
25. $5\sqrt{40}\cdot3\sqrt{60}$
26. $\sqrt[3]{49}\cdot\sqrt[3]{49}$
27. $3\sqrt{5}+4\sqrt{5}$
28. $2\sqrt{7}+7\sqrt{2}$
29. $\sqrt{75}-\sqrt{20}$
30. $2\sqrt{11}+7\sqrt{11}-4\sqrt{11}$
31. $7\sqrt{6}+4\sqrt{3}-3\sqrt{6}+2\sqrt{2}$
32. $3\sqrt{72}+2\sqrt{75}-3\sqrt{27}+\sqrt{108}$

Solve.

33. $2|x|-15=23$
34. $4-7|x|=-17$

With the equation $f(x)=2|x|-1$ and the graph of $g(x)$, find:



35. The domain and range of $f(x)$
36. The domain and range of $g(x)$
37. $4\cdot f(-1)$
38. $-5\cdot g(0)+f(2)$

Give all of the classifications for each number and underline the most specific classification.

39. 7423
40. $\frac{2}{15}$
41. 0.0174529816283...
42. π
43. 0
44. $\sqrt{2}+\sqrt{3}$
45. -12

Rationalize the Denominators

46. $\frac{6}{2\sqrt{3}}$
47. $\frac{2\sqrt{5}}{\sqrt{3}}$
48. $\frac{4}{\sqrt{20}}$