Name _____

Alg 2 Trig Practice REVIEW CH. 6

Work the following problems on a separate paper:

Evaluate: (no calculator)

1. $\sqrt[4]{-16}$
2. $\sqrt{\frac{100}{9}}$
3. $\sqrt[3]{\frac{8}{27}}$
4. $\sqrt[6]{\frac{1}{64}}$
5. $\sqrt[5]{-32}$
6. $27^{\frac{1}{3}}$
7. $\left(\frac{64}{81}\right)^{\frac{1}{2}}$
8. $121^{\frac{1}{2}}$
9. $512^{\frac{1}{3}}$
10. $\left(-\frac{8}{27}\right)^{\frac{-2}{3}}$
11. $(16)^{\frac{5}{2}}$
12. $100^{\frac{3}{2}}$

Simplify:

13. $6^{\frac{4}{3}} \cdot 6^{\frac{2}{3}}$
14. $p^{\frac{1}{5}} \cdot p^{\frac{1}{3}}$
17. $\frac{\sqrt[3]{n^4}}{\sqrt[5]{n^4}}$
18. $\sqrt[4]{6^8}$
19. $\sqrt[3]{x} \cdot \sqrt{x}$
20. $-\sqrt[4]{32a^5b^7}$
21. $\sqrt{45} \cdot \sqrt{300}$
22. $\sqrt{18m^2}$
23. $\sqrt[4]{\frac{1}{16}m^8n^{20}}$
24. $5\sqrt{8}+3\sqrt{22}-3\sqrt{50}$
25. $15\sqrt[3]{81}-4\sqrt[3]{24}$
26. $(2\sqrt{3}+\sqrt{5})(\sqrt{6}-3\sqrt{5})$
27. $\frac{6}{\sqrt{12}}$
28. $(\sqrt{6}+2)(\sqrt{6}-2)$
29. $\sqrt{3}(\sqrt{12}-4)$
30. $(4\sqrt{x}+3)^2$
31. $\frac{-8}{\sqrt{y^5}}$
32. $\frac{2}{4+\sqrt{3}}$
33. $\frac{12}{\sqrt{6}+\sqrt{3}}$
34. $\frac{-1-\sqrt{3}}{\sqrt{6}+5}$
35. $\sqrt[3]{-64r^3w^{15}}$
36. $\sqrt{x^2+10x+25}$

Solve:

37. $\sqrt{x+1}=7$
38. $\sqrt{3x-5}=x-1$
39. $2\sqrt{x}=\sqrt{3x+4}$
40. $\sqrt{4x+3}+1=0$
41. $\sqrt{4p+7}=\sqrt{3p+5}$
42. $\sqrt{4x+7}-4=\sqrt{4x-1}$
43. $\sqrt[3]{n-8}+2=0$
44. $\sqrt{2}-\sqrt{b+6}\le-\sqrt{b}$