Honors Math II Name_____

Unit 1.3 simplify, add, subtract, radicals Period_____

Simplify. Leave answer in reduced radical form. (no calculator)

1. $\sqrt{36}$	2. $\sqrt{48}$	3. $\sqrt{112}$
4. $\sqrt[3]{108}$	5. $6\sqrt[3]{32}$	6. $-8\sqrt{40}$
7. $-3\sqrt{3}+12\sqrt{3}$	8. $4\sqrt{2}-3\sqrt{3}+7\sqrt{2}$	9. $2\sqrt{x}+7\sqrt{x}$
10. $3\sqrt{12a}+5\sqrt{48a}-6\sqrt{75a}$	11. $-5\sqrt{120}$	12. $6\sqrt[3]{5}+2\sqrt[3]{40}$
13. $5\sqrt{5x^2}-\sqrt{45x^2}$	14. $2\sqrt{27mn}-3\sqrt{48mn}$	15. $8\sqrt[3]{2}+4\sqrt[3]{16}$

16. $\sqrt{25}+\sqrt{75}$	17. $3\sqrt{25x^4}-8\sqrt{x^2}$	18. $\sqrt[3]{16}+\sqrt[3]{54}$
19. $\sqrt[3]{25x^3y^5}$	20. $\sqrt{45xy^4z^7}$	21. $\sqrt{64x^9y^8}$
22. $7\sqrt[3]{8x^{12}y^{15}}$	23. $3\sqrt{100x^2y^2}$	24. $-5\sqrt{48x^7y^3z^8}$

25. For each equation, find the integer k that satisfies the equation.

a) $\sqrt{8}=k\sqrt{2}$ b) $\sqrt{12}=k\sqrt{3}$ c) $\sqrt{45}=k\sqrt{5}$

26. For each equation, find the integer k that satisfies the equation.

a) $\sqrt{500}-15\sqrt{5}=k\sqrt{5}$ b) $\sqrt{605}+\sqrt{5}=k\sqrt{5}$

Rewrite as a single radical with no coefficients. (unsimplify)

Example: $4\sqrt{5} = \sqrt{80}$

27. $5\sqrt{3} = ?$

28. $7\sqrt{4} = ?$