Secondary Math III Name: _____
Operations with Radicals Period: _____
Assignment 8.5
Carnegie Page 686 #6a, 6b, 6d, 6e, 6f

Simplify and Combine (if possible). Assume all variables are positive.

1. $\sqrt{18}+\sqrt{50}$
2. $2\sqrt{27}-\sqrt{12}$
3. $3\sqrt{7}-2\sqrt{63}$
4. $\sqrt[3]{16}+3\sqrt[3]{2}$
5. $-2\sqrt{9y}+10\sqrt{y}$
6. $2\sqrt[3]{p^5}+3\sqrt[3]{p^5}$
7. $2\sqrt[3]{3}-5\sqrt{81}$
8. $5a\sqrt{y^2}+6y\sqrt[3]{a^3}$
9. $x\sqrt{9x^3}-2\sqrt{x^5}$
10. $8\sqrt[3]{2x}-\sqrt[3]{54x}$
11. $\sqrt{72}-4\sqrt{98}$
12. $12\sqrt[3]{2x^5}-x\sqrt[3]{54x^2}$

Rationalize the denominator and simplify.

13. $\frac{\sqrt{18}}{\sqrt{2}}$

14. $\frac{5x^2}{\sqrt{10x}}$

15. $\frac{4}{\sqrt{6}}$

16. $\frac{6x}{\sqrt{3x}}$

17. $\frac{3\sqrt{5}}{5\sqrt{3}}$

18. $\frac{3}{\sqrt[3]{3}}$

19. $\frac{1}{\sqrt[3]{4}}$

20. $\frac{8}{\sqrt[3]{2}}$

ACT Practice:

21. $(n^7)^{11}$ is equivalent to:
F. n^{77}
G. n^{18}
H. $11n^4$
J. $11n^7$
K. $77n$

22. If $8a^6b^3 < 0$, then which of the following CANNOT be true?
F. $b < 0$
G. $b > 0$
H. $a = b$
J. $a < 0$
K. $a > 0$

23. If g is an integer, which of the following could NOT equal g^2 ?
A. 0
B. 1
C. 4
D. 8
E. 9

24. If $x = 3yz^2$, what is y in terms of x and z?
A. $\frac{x}{3z^2}$
B. $3xz^2$
C. $\left(\frac{1}{3}\right)xz^2$
D. $\frac{z^2y}{3x}$
E. $\frac{\sqrt{x}}{3z}$